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ESTABLISHMENT OF THE ARAB REGIONAL PACKAGING CENTRE

DP|RAB|83|020|11-03

Technical report: Packaging documentation and information dissemination*

Prepared for the Arab Industrial Development Organization
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of Kurt H. Garmin, Consultant in
packaging information and documentation

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Vienna

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Summary

A mission was carried out in the period December 1986 to February 1987 to AIDO, Baghdad and IMEC, Casablanca in order to identify the systems available in the two institutions for collection, storage and dissemination of packaging information.

It is concluded by the consultant that

- intense efforts should be made to establish and strengthen national packaging information initiatives in the Arab countries,
- regional packaging information centres should be established in order to support the national initiatives and intensify the co-operation within the field of packaging between industries with common technical, commercial and cultural background,
- a joint Arab packaging information co-ordination committee should be formed to secure optimum utilization of packaging information available within the Arab region and co-operation with the relevant industrial federations already established within the region,
- a joint packaging documentation system should be established as part of the general joint Arab industrial documentation system under establishment,
- a regular Arabic packaging newsletter should be issued for distribution to the relevant industrial and other professional users of packaging information through the network of national packaging information focal points, and
- a project should be set up for preparation of an Arab packaging information programme based on national packaging focal points. The preparatory project should be set up under the management of an organizing committee with representation of Arab governments and industries, including joint Arab industrial federations.

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I. CONDUCT OF THE MISSION

This mission was part of the project DP/RAB/83/020, Establishment of the Arab Regional Packaging Centre which is implemented by UNIDO in conjunction with AIDO, the Arab Industrial Development Organization.

It was the purpose of this mission to study the information and documentation systems established at AIDO and IMEC, l'Institut Marocain de l'Emballage et du Conditionnement, and to assist in setting up a packaging information centre at a regional basis and in the establishment of a regular packaging bulletin in Arabic. The detailed job description is reproduced in Annex 1.

The consultant arrived in Casablanca on 28 December 1986, and was briefed by the Chief Technical Adviser, Mr. R.K. Chowdhary. He left Casablanca on 4 January 1987 and arrived in Baghdad on 5 January 1987. He returned from Baghdad to Casablanca on 19 January 1987. The consultant left Casablanca on 10 February 1987 and concluded the mission in Vienna on 11 February 1987.

The consultant worked during the mission in contact with staff members of AIDO and IMEC; the principal co-operation partners are listed in Annex 2. The consultant wishes to express his gratitude to the managements and the staff members of the two institutions for their professional support and their friendliness during the mission. He wishes to thank the IMEC staff for the efforts to arrange field visits to Moroccan industrial users of packaging information. Unfortunately, the efforts rendered fruitless.

The consultant gave advices to the IMEC library staff during the mission on grouping of the books in the library and on acquisition of packaging periodicals. He, moreover, submitted a bibliography on English language packaging documentation for

for future procurement by IMEC, and for the Syrian Arab Organization for Standardization and Metrology.

The duration of the mission did not allow for visits to other Arab countries than Morocco and Iraq in order to identify potential national packaging information focal points and other local and regional potential co-operation partners for dissemination of packaging information. A list of such potential partners, also including the official packaging focal points already established was prepared and is reproduced as Annex 3.

II. THE DEMAND FOR PACKAGING INFORMATION

Packaging information is required throughout the entire socio-economic structure dealing with supply and use of physical goods. The quantity of packaging information transmitted within this structure is immense, and the character of this information is probably more diversified than within any other economic activity.

The main purpose of any packaging information and documentation activity is, therefore, not to collect or diffuse as much information as possible, but

- to identify the users of the packaging information and their specific needs,
- to select that information which corresponds to the needs of the users,
- to accumulate the information in such a way that it can be efficiently retrieved, and
- to transmit the information at the right time and in the most efficient manner to the target groups.

Users segments

Most users of packaging information as a background for decisions have a narrow packaging information requirement profile determined by their specific field of operation. By designing any information activity within the field is it essential clearly to define the segments of users, and the character of the information to be communicated. Unfortunately, there is not a clear coherence between the users classified according to traditional segmentation and their needs for packaging information. Much information is of interest to several groups of users. For clarification of the purpose of establishing packaging information activities it is useful, anyway, to identify the distinctives of the main groups of users.

Suppliers of raw materials and conversion technology

A wide range of materials are used for packaging. Highly specialized materials are produced large scale by investment intensive units with a typical profile like

- a strict control of incoming primary materials, processing and end products,
- a scientific staff to look after development of new products, to follow the technological development within the fields of interests, and to react adequately on problems, proposals and other initiatives from the users of the materials produced
- a marketing activity containing such elements as continuous technical and marketing information supply, current personal contacts by qualified representatives, and production advisory service to important, faithful customers - an activity which at the same time secures a continuous feed-back of qualified information to the materials suppliers.

This type of materials suppliers operate internationally in the paper/paperboard, plastics and metal fields supplying their materials largely to the more sophisticated, quality sensitive range of packaging converters. The commercial relations to the customers are typically of a long lasting nature, and based on mutual confidence and a high degree of responsibility by the materials supplier for technical and marketing problems which the converters may face.

A certain trend of vertical integration by take-over of existent converters has been observed, a development which has been promoted by the technical and marketing development in the field of packaging, and which offers the materials suppliers

- direct access to conversion level technological and end-use marketing information,
- improved possibilities to adapt materials properties to the specifics of the conversion technology and, similarly, to adapt new investments in conversion technology to the materials production,
- better security for a demand for raw materials produced and pay-back of investments in new technology, and

- less sensitive to fluctuations in materials prices.

Excess productions and non-standard qualities are channeled through the spot market to the price competition share of the packaging converting market otherwise supplied by less quality and less service oriented materials suppliers.

This latter group of mainly price competing materials suppliers is an inhomogeneous group of mainly smaller and medium size manufacturers situated throughout the world. The smaller manufacturers are typically oriented towards the local packaging converting industry, the larger often to some extent internationally. Such manufacturers have a limited or no scientific back-up capacity, little or no quality control, no regular technical or marketing information service to their customers or production advisory service. The commercial relations vary depending on the specific conditions, but they are generally of a less constant character than those which are common in the more sophisticated range of the market.

Vertical financial relations exist between materials producers and converters in the price competing range of the market, but they are rare. A special financial construction exists in some countries with high import duties on materials, a construction in which a large packaging converting industry has its own materials manufacturing, exclusively supplying materials for own conversion. Such constructions are in particular known in the paper/paperboard sector.

The major part of the packaging converters in the developing countries are supplied via the spot market/price competition market.

A situation of a similar nature prevail in the field of machinery for packaging production. Advanced machinery manufacturers offer high-speed, highly specialized equipment requiring constant quality materials (as produced by the sophisticated materials suppliers) packaged with training programmes and after-sales service also including follow-up information services. Others use price as their main parameter, sacrificing

new developments, quality and quality control, service, training and information activity.

There is a considerable trade in second-hand machinery, partly organized through brokers specialized in this type of machinery. A large share of the second-hand machines are traded from the industrialized to the developing countries.

Packaging converters and packaging machinery makers

The converters of the materials into finished packaging and semimanufactures for final confectioning by the packers constitute a broad range of production, from small scale handicraft to highly specialized, sophisticated technology, and cover a wide variety of transformation techniques with little in common, except their market, their customers demand for containers.

The markets are generally of a local character, as transport costs of empty packaging are generally higher than transport costs of the materials. Exceptions exist, mainly within the sophisticated part of the plastic packaging field where high value/volume ratios of the packaging in combination with high output/high specialization technology prevail. A considerable international trade has been established in such fields.

The larger converters operate their own research and development activity, conduct information activities and a close contact to their customers; they have a qualified engineering staff to follow up on any problems which may occur to their customers in the use of their packages, and to continuously report on new developments in the market and new demands by their customers as a basis for development initiatives.

Most packaging is, anyhow, produced by converters with no or only limited development resources, a mainly practical background in respect to packaging production technology, and less systematic knowledge in respect to the demands of their customers and their customers' customers; their production is to a high extend copies of others' developments, their market po-

sitions frequently due to the users' ignorance and a weak competition, because of market share and price arrangements, high transport costs of finished packaging, and import duties and quantitative regulations.

Compared to other technological fields is packaging, as a whole, a low research and development area, and a field of knowledge to which not much is recognized outside a narrow range of specialists working on the supply side.

The research and development oriented industries are based in the industrialized countries, the more copy-oriented all over the world.

Financial relations exist between packaging production units making identical packaging types in different geographical areas, as well as between packaging production units making different types of packaging for a certain geographical market. Know-how arrangements are normally part of such relations but do also exist on a fee basis, independent of financial connections. Financial as well as know-how arrangements between packaging converters in industrialized and developing countries exist.

The packaging machinery industries serve the same markets as the packaging converters. These industries are highly specialized and frequently based on world market sales. Their technological level vary; the more advanced are normally based on a combination of genuine craftsmanship, medium technology, flexibility and contact to the users of their machines. Copying, mostly in part, is common, especially within the lower technology range of the packaging machinery field. Such more or less copy machines are made to order as well as in series for sales to a wider range. The packaging machinery industry is almost fully situated in the industrialized countries; the machines made in the 3rd world are simpler machines and copy based.

Packaging users

Practically all producers of physical goods are users of some kind of packaging. This segment of packaging information users include, consequently, any type of manufacturing establishment in respect to size, production technology, knowledge foundation, etc. Their interest in packaging vary considerably according to their packaging expenditures, their practical packaging experiences and their awareness of the importance of packaging in respect to total costs, sales price elasticity and market penetration. Few only, mainly larger manufacturers of packaging intensive products and research and development oriented industries take an interest in packaging to that extent that they employ staff members with a systematic, scientific background in packaging. Most packaging users are rather superficially conversant with packaging and rely mainly on the experience of the packaging suppliers. There is, anyway, a growing awareness among the major packaging users of the importance of packaging, and of the necessity of a background knowledge in order to be equal partners with the suppliers in the development and selection of packages suitable for their products and markets.

Service industries

A range of service industries have an interest in packaging information. Such industries include

- transporters of any kind of packaged products due to their responsibility for the safe delivery, their interest in economic utilization of their capacity and manpower, and their interest in prevention of damages and injuries to their personnel and equipment,
- traders of packaged products throughout the supply chain due to their interest in safe delivery, minimum handling and storage costs, customers' acceptance and lasting sales, and
- insurance companies due to their interest in minimum damages during transport.

The interest these industries pay to packaging vary according to their specific activities, but packaging is seldom consid-

ered high priority, and packaging specialist staff members are rare; within these segments, especially the transport industries, is packaging considered an association question to be dealt with jointly by the branch, nationally and internationally in form of recommendations, standards and regulations. Such norms are frequently backed by legal regulations.

Traders do normally not involve themselves in technical questions about packaging, unless it has a direct influence on their handling costs. They rather prefer to seek other suppliers in case of high damage rates and failing consumer acceptance.

End-users

Most industries, trades and institutions are end-users of packaging. Their interest in packaging is related to

- safe delivery of the contents,
- clear marking of type, variety and quantity of contents, production batch and date, etc.,
- unit quantity corresponding to processing and rate of turnover,
- convenience and safety in storage, handling and emptying of the packaging, and
- uncomplicated disposal of the empty packaging.

These requirements vary according to the products in question and the industries and trades involved. Although packaging is considered a parameter by the professional end-users its priority is evaluated differently. There is, anyhow, a tendency among the larger buyers of packaged products to include packaging among the more important elements by selection of supplies. Such buyers are, consequently, to an increasing extent users of systematic packaging information.

Private consumers include packaging in their decision making, but do normally not demand packaging background information.

Authorities

Authorities are diversing into activities also involving packaging. Such activities include particularly

- consumer protection regulations, also comprising such aspects as health protection, protection against accidents and fair trades rules,
- occupational protection regulations,
- environment protection regulations, and
- primary materials economy regulations

In consequence, the legislative authorities are also demanding packaging information.

Types of packaging information

The diversity in the demand for packaging information in respect to users is reflected also in the types of packaging information demanded, covering a wide range of technology and commerce.

Technical and techno-economic information

Technical packaging information is related to production aspects and to functional aspects, with considerable overlapping between the two.

The typical 3-step production pattern: materials production - conversion - packing is reflected in the demand for packaging information.

Information about production of materials for conversion into packaging is normally not considered packaging information, although the trend towards specialized production of materials exclusively for conversion into specific types of packaging tend to bind the materials and the packaging technologies closer together.

General information about the properties of materials relevant to their use for packaging is widely available in published

form from neutral sources as well as from industrial.

Larger suppliers of materials publish information about the specific properties of their materials, and render detailed information on the selection and proper conversion of their materials into packaging, and even information related to the use of such packaging to their converter customers. Smaller suppliers of materials have generally less information available about the properties of their materials, and are less interested in committing themselves to precise specifications of their products.

Materials properties information is available to a limited extent from independent institutes, frequently in the form of comparative studies involving more producers. Such studies are normally carried out on a sponsorship basis, and the results are not made available to the public.

Conversion of materials into finished and semifinished packaging materials is following a similar trend as the development within the materials industries. Production of packaging is nowadays generally specialized technologies, although in many cases variants of technologies used in other productions. The generalities about the packaging conversion technologies and economies are available to the public, but the specifics are normally kept confidential within the industries producing conversion equipment and those using it. Most information of this character is available from sales oriented information material produced by the specialized packaging conversion technology producers, but profound and specific information is normally restricted to converting industries which can demonstrate a serious potential for the supplier's equipment.

The technical information required by the converters is related to

- availability, costs and properties of alternative materials and their influence on runnability, production economy, waste factor, and on finished/semifinished packaging quality,
- efficient machine operation in respect to materials economy,

- quality maintenance, capital and manpower utilization, reliability and wear,
- availability, costs and functions of other (newer) production machineries and accessories, and their influence on the present and future packaging situation, and
- development of new types of packaging and adjustments of existing, especially such developments which have an influence on the market situation and the production economy.

General information about finished and semifinished packaging materials is available in many forms from neutral sources, e. g. books and periodicals, and to a limited extent also from industrial sources.

Specific information is available to a varying degree of explicitness from the suppliers of finished and semifinished packaging materials. The most advanced communicate information about their packaging products' properties and their proper use in different forms to their established and potential customers, and to some extent to others. The majority of suppliers have a weak capacity in respect to specific information about their products, most often limited to specifications of construction and dimensions included in the order confirmation with a certain backing in the form of oral information, occasionally assisted by sample-making, brochures, and show-room or public exhibition of sample packages.

- The packaging users need technical information in order to reduce risks in decision making. Such include information about
- sensitivity of the contents and the quality tolerance limits of the market in respect to contents and packaging,
 - the environments to which the product is exposed when packed, handling and storage conditions, and transport regulations,
 - alternative packaging materials and constructions available and their functional properties compared to the product's sensitivity/tolerance/environmental stress profile, investments and running costs, supply alternatives, and runnability on packaging machinery, and
 - technical and economic possibilities for fulfilment of the

marketing demands in respect to appearance, legal requirements, unit quantities, convenience in handling and use, and discharge/reuse.

Technology for converting semifinished packaging materials and combining packaging and contents into packed products (packaging machinery) cover a broad range of technologies, mostly of a highly specialized nature in respect to type of contents and packaging materials. General information is to some extent published, mostly in the form of press information prepared by the machinery producers. Most specific printed information is in the form of brochures which are used for general promotion and as sales information in support of quotations. The qualified packaging materials suppliers have generally a good practical knowledge of the specifics of a range of machinery, information collected from their involvement in solution of their customers' daily running problems.

Technical information requirements include

- availability of equipment,
- costs of alternative equipment, including investment, installation, financing, running costs, packaging materials costs, life time and space requirements,
- functions of alternative equipment, including principles, reliability, sensibility to packaging materials variations, ranges of packages and contents which can be processed, capacity, maintenance requirements, adaptability to preceding and subsequent equipment and processes, supply and auxiliary equipment requirements and skilled manpower requirements,
- availability of packaging materials and auxiliary provisions, and
- service systems availability in respect to technicians, spare parts, extension possibilities and staff training.

This type of information is not different in principle from information required in connection with other investments and operation of other types of industrial equipment, but the range of technologies is in general different in kind from the range which is otherwise connected with a specific type of production, and cover a wider and more complex spectrum of al-

ternatives.

Commercial information

The trading patterns within the field of packaging is similarly complex. Most packaging types have a range of potential markets and most products can be packed in a range of different ways - each application requiring a certain degree of adaptation, each type of packaging implicating a compromise in respect to fulfilment of the requirements. The variegated packaging market mainly has its background in the multiplicity of the product specific requirements in respect to protection, distribution and product use requirements, promotional quality, in combination with costs and availability of packaging materials, sales volume of the packed products and other technological circumstances. But product end users preferences, local traditions, sales promotion activities and contingencies influence the situation as well, and tend to give each market segment its special character.

The markets for materials, conversion equipment and packaging machinery are the results of the decisions made on the packing level, and of the successes of the packed products on the industrial and consumer markets, and of the ability of each producer to adapt and influence the decision makers throughout the product supply chain.

Packaging information transfer

Sources

Packaging knowledge is predominantly of industrial origin, accumulated through the practical work and generated by research and development activities throughout the industries from raw materials to finished products.

Packaging institutes and institutes operating in packaging raw materials fields (paper, plastics, glass, metals, wood) and in packaging application fields (food products mainly) carry

out research and development work relevant to packaging, and collect and compile information for publication.

Communication channels

The principal packaging information transfer takes place within the industrial system, through the regular commercial contacts between producers and users, orally, by letter, through brochures and to some extent by conferences, training arrangements, etc. The public and semipublic packaging information transfer channels operating is mainly to be considered a complement in support of the industrial communication system, and an auxiliary supply system for use when the ordinary system for some reason is not functioning.

Textbooks

Basic textbooks on packaging in general are published as well as textbooks dealing with packaging for specific products (food, pharmaceuticals, chemicals, furniture), or special aspects such as testing, regulations, or labelling. They are good technical background information sources, but only few are so specific that they can serve as background for decisions. Most textbooks are in English, a number in French and German, only few in other languages. Most packaging textbooks are published in USA, UK, France and FRG. A list of selected packaging textbooks is reproduced in Annex 9, sections A and B.

Periodicals

Packaging periodicals of a wide variety exist. Few only of these periodicals publish articles of original technical character, the main function being a continuous updating of the general packaging trends. The main sources of information are press releases issued by the packaging and packaging machinery producers, special articles prepared by these industries, interviews, information about packaging events, reviews, comments to rules and regulations, local suppliers guides and advertisements. Besides the general updating function is it a function of the periodicals to establish contact between pro-

ducers and potential users of packaging and packaging machinery. Packaging periodicals are issued in almost all industrialized countries and in some developing. They are made for their local markets; some have a certain international circulation, but as such circulation does not attract much advertising only little effort is made by the publishers to extend the international circulation. Most periodicals are predominantly financed by income from advertisements.

Selected lists of packaging periodicals are reproduced in Annex 9, sections A and B. The editors of packaging periodicals have formed an international organisation: International Packaging Press Organisation (IPPO), Postbus 4, 7000 BA Doetinchem, Netherlands.

Suppliers guides

Establishment of contacts between producers of packaging and packaging machinery and potential users of such items is also the purpose of the packaging suppliers guides which are issued on a regular basis in most industrialized countries, and in a few developing.

Standards

Official international and national standards are issued by ISO, Case postal 56, 1211 Geneva 20, Switzerland, and the national standardisation institutes. Such standards cover testing methods, packaging dimensions and constructions, terminology, marking and a range of other subjects which are normally covered by standards. Almost all countries have issued packaging standards. Among the leading countries are USA (ASTM/ANSI), UK (BS), France (AFNOR), FRG (DIN) and USSR (GOST), and to a lesser extent India (IS) and Japan (JIS). The dissemination of the official standards is promoted through the standardisation institutes.

USA, UK and Indian standards are in English, many German and Japanese standards are translated to English, but most national standards are issued in the national languages only.

National and regional standards are published by branch organisations in addition to the official standards. Such include paper testing standards by TAPPI (USA) and SCAN (Scandinavia), corrugated fibreboard testing standards by FEFCO (W. Europe) and glass bottle standards by CeTIE (W. Europe). Many official standards have their origin in branch organisation standards. Of a similar type are the set of standards regulating the use of bar coding systems UPC (N. America) and EAN (W. Europe, Japan, Australia). Related are also standards established by the transporting organisations, although those to an increasing extent are transferred to legal regulations. Branch standards are promoted to the benefit of the members, but are normally also available to non-members.

Statistics

Statistical information is used as a background for decisions by the packaging producers, but the information available is often incomplete. Market surveys are carried out by the packaging suppliers on the basis of their sales statistics, supplemented by information attained from their co-operation with the users, and from their materials suppliers. Such surveys are occasionally made in co-operation with marketing surveyors. This information has the advantage that it quantifies the relation between the specific packaging and its use. Market surveys are generally not available to the public.

The official trade and production statistics are of limited value as it is in most cases insufficiently specific. Packaging is in many cases included in wider positions, and when indicated explicitly normally in the form of overall figures of limited value. The official trade and production statistics do not indicate the use of packaging types for specific purposes.

A regular overall packaging statistics is published in USA, in some other industrialized countries on a less regular basis. Such statistics are based on information acquired from the converters, and frequently incomplete, but their regularity gives a certain support for estimation of the general trends in the packaging development.

USA packaging statistics are available from Current Industrial Reports, Bureau of the Census, Washington, DC 20233, USA. European packaging statistics are available from PIRA, Randsalls Road, Leatherhead, Surrey KT22 7RU, United Kingdom. Japanese packaging statistics are available from Japan Packaging Institute, Honchu Building, 5-12-8 Ginza, Chuo-ku, Tokyo 104, Japan.

Some specialized branch organisations (national and regional) within the field of packaging carry out branch production statistics, mainly as a service to their members. Such statistics is mostly considered confidential to the members.

Legislative regulations

Of increasing importance to the field of packaging is the legislative rules regulating packaging. These rules are not always designed with proper consideration to packaging technology and functions. Other problems are

- differences in substance, form, interpretation and enforcement of the rules from one country to the other, and even within countries,
- use of national languages, and
- inefficient dissemination, normally through the special official law journals only.

Patents

Patents play generally a minor role in the field of packaging. Most packages are variations of generally known constructions, and production procedures are normally considered better protected by concealment.

Abstracts and information services

Two specialized packaging abstract periodicals have obtained a general international circulation:

- International Packaging Abstracts which is concentrating mainly on technical subjects, and
- Predi-brief Containers and Packaging which is concentrating

mainly on commercial aspects.

Moreover, some national packaging abstract services are in operation, but of decreasing importance. Other specialized abstract periodicals cover packaging to the extent packaging comes within the overall scope of these periodicals.

The International Packaging Abstract references are available on-line through Pergamon Press.

ITC is in the process of developing an export packaging abstract service for worldwide distribution on 5 1/4" diskettes. The abstract service is planned to function on a mutual basis: Users of the service will be responsible for supply of a specified range of abstracts.

International and national standards from leading industrialized countries, and references to suppliers of industrial equipment are available on microform on a subscription basis from IHS. This service secures a continuous updating of the ranges of standards subscribed to. Packaging as such can not be subscribed to specifically by IHS, but as part of other sub-sectors only.

A list of important abstract and information services is reproduced in Annex 9, section C.

Audio-visual aids

Valuable packaging information exists in the form of standard films, mostly 16 mm, and video programmes. Most of such programmes are made by producers of materials, plastics raw materials in particular, and equipment as support of their marketing activities. They are, unfortunately, normally not generally available. PIRA has developed a range of programmes based on 5x5 cm slides and matching documentation. ITC has developed a slide programme on arrival condition of export packages from developing countries.

Exhibitions

Packaging exhibitions are important intermediaries of technical information within the field of packaging, especially in respect to equipment. The most important exhibitions are

- Interpack, Düsseldorf (organizer: NOWEA)
- Pakex, Birmingham (organizer: Industrial and Trade Fairs Limited)
- Salon de l'Emballage, Paris (organizer: SEPIC)
- Pack-Expo, USA (organizer: PMMI)

A calendar of packaging and packaging-related exhibitions is issued annually by ITC.

A worldwide organisation of packaging exhibitions has been established: Confederation of Organizers of Packaging Exhibitions, P.O. Box 8800, 3503 RV Utrecht, Netherlands.

Information centres

Packaging information centres are established in most industrialized countries and in some developing countries. Most of these centres are members of regional associations. A worldwide organisation for packaging information centres and regional associations is formed as well: World Packaging Organisation, 42 avenue de Versailles, 75016 Paris, France.

Individual consultants and consultancy houses

Packaging has developed into a specialty, or rather a range of specialties. a number of independent consultants are operating in the field on national and international basis. An international organization of packaging consultants has been formed: International Packaging Consultants, Route de Sichoze 12, 1814 La-Tour-de Peilz, Switzerland.

III. FINDINGS

1. Institut Marocain d'Emballage et Conditionnement (IMEC)

1.1. Organisation and activities

IMEC was established in 1963 as a service institute. It is a semi-public organisation.

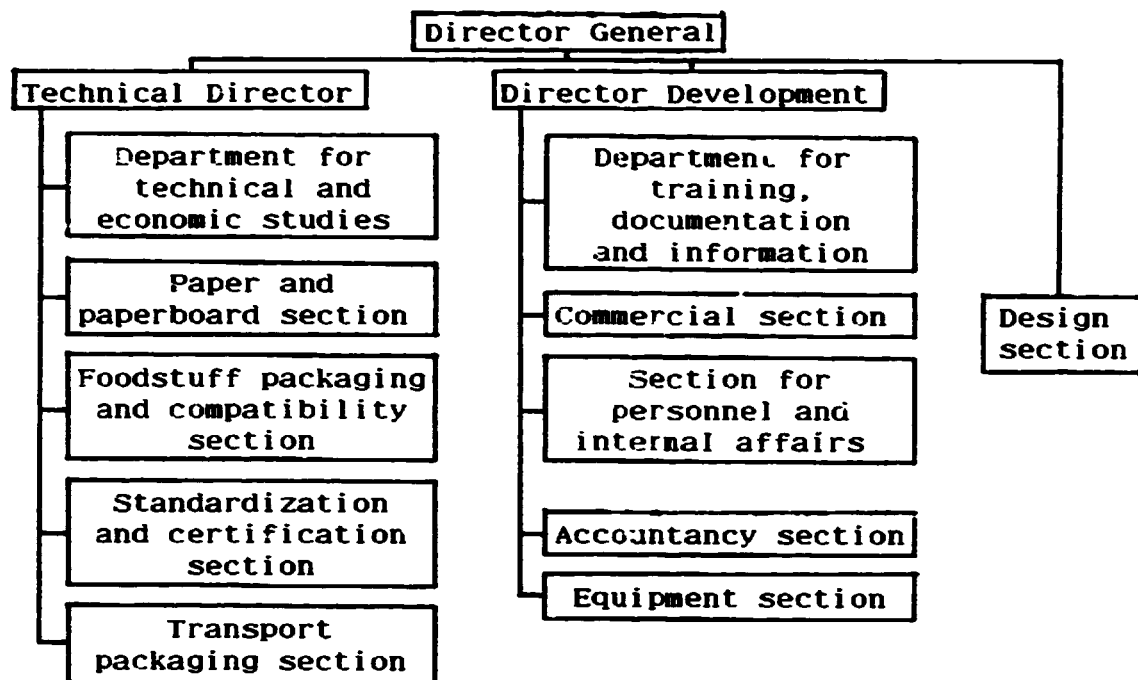
The daily management of IMEC is in hands of Mr Zaki Ali, Director General, who is responsible to the Board of Directors representing the packaging industry and the Ministry of Commerce and Industry.

IMEC is a fully equipped packaging institute covering the total range of services connected with packaging institute activities. The organisation chart of the institute, after the changes made in January 1987 is reproduced in table 1. It should be noticed that the training and information/documentation services are now placed within the same section of the organisation. The total staff is approx. 50 persons.

A study carried out by IMEC in 1986 has identified the number and character of the industrial and similar enterprises with whom IMEC has co-operated on commercial terms over the period 1980-85. The main results of this study is reproduced in table 2.

IMEC holds a unique position in the Arab world due to its multi-service ability and its many years of experience, and its practical experience in co-operation with packaging manufacturers and users at production level.

Table 1. Organizational structure and training/documentation/information activities of IMEC



Activities of the dept. for training, documentation and information

Training activities

Courses
Seminars
Conferences
Education

Documentation and information activities

Publications/Emballage et Conditionnement
Documentation/library
Enquiry service
Abstracting
Classification and storage of information
Operation of information on Visiotexte

Table 2. Paid services rendered by IMEC 1980-85

	1980	1981	1982	1983	1984	1985
Testing						
No. of testing tasks	15	59	52	61	76	105
Studies						
No. of contributions	2	14	8	2	2	6
Training						
No. of firms represented		21	19	32	43	39
Emballage et Conditionnement						
No. of subscriptions	11	72	75	78	82	113
No. of advertisers	6			1	1	12

This position may be further developed by intensified contact to and contributive influence of the identified users of packaging services on the IMEC activities, including the information dissemination activities.

1.2. Information and documentation activities

The information and documentation services are well organized and include:

1.2.1. A specialized packaging library containing primary documents in the form of

- a. Approx. 900 textbooks on packaging and related subjects, general handbooks, directories, statistics, dictionaries and similar manuals, mainly in French, the balance mostly in English. For extension of the English language packaging textbook documentation the list of documents reproduced in annex 9 could be consulted.
- b. Approx. 1150 reports and other specialized documents on packaging, almost entirely in French. The reports include documents issued by international organisations, conference and seminar reports, monographs, training handouts and bibliographies.
- c. Approx. 400 brochures from suppliers of packaging and packaging machinery, mostly in French, the balance mostly in English.
- d. Approx. 300 microfiche sheets containing indexes, abstracts and primary documents from the Tech-briefs issued by National Council of Canada, Technical Information Service. They are all from 1980 and earlier, and are not in daily use.
- e. One or more annual volumes of periodicals in the field of packaging and related areas, such as general business, food industry and transport.

Over 50% of the periodicals are in French, a number in English and a few in Arabic. The number of periodicals subscribed to has been reduced over the last years. Many of the international packaging periodicals have been abandoned, one of the reasons being the high costs.

All documents according to items a. and b. are registered in 2 registers each chronologically arranged according to the character of the primary documents - one for books, one for reports.

Documents according to item c. are numbered separately.

The microfiches (item d.) are not registered.

Periodicals are registered on Kardex cards for control.

1.2.2. A documentation service based on

a. Approx. 4000 numbered abstracts of documents selected from the primary documents as described in par. 1.2.1., each classified by use of key-words. The abstracts No. 0-approx.3000 are classified by use of non-standardized key-words. The abstracts from approx. No. 3000 and onwards are classified according to the AIDO/UNIDO/IMEC packaging thesaurus. The abstracts have been produced over a period of 8 years. Each classification is using 1-5 key-words.

The abstracts are drawn from the documents as listed in par. 1.2.1., items a., b. and e.

A manual retrieval system using key-word cards as reference to the abstract numbers is established. A trial is made to transfer the abstracts to a computerized system using an IBM

Visiotext word processor. The specification of the machine is reproduced in annex 5, section A. The consultant is doubtful whether such transfer is feasible. For further comments to the computer question, see par. 3.1, page 37.

- b. Brochures (item c.) are classified using key-words and in the process of being registered on key-word cards (with reference to brochure number) for easy retrieval in a manual system parallel to the manual system described above.

Unfortunately, it has been experienced that the AIDO/UNIDO/IMEC packaging thesaurus is limited appropriate only as a tool for classification and retrieval of packaging documentation. For further comments on the thesaurus question, see par. 4, page 39.

- 1.2.3. An enquiry service serving the needs of other IMEC activities as well as outsiders, such as industries, research institutes and branch organisations, is established and functions on the basis of the books in the library, the manual retrieval system and the staff experience. The service is rendered mostly in the form of documents rather than personal advice.

The enquiry service responsible has informed that the service receives approx. 10 enquiries per month from outside in addition to 2-3 enquiries per day from other IMEC departments. The outside enquiries comprise technical and commercial subjects; most enquiries require some formulation assistance.

All enquiries are registered on standard forms as reproduced in annex 6, section A.

- 1.2.4. IMEC issues a quarterly bulletin - "Emballage et Conditionnement". The bulletin is in French with certain articles translated to Arabic. Each issue is approx. 60 pages, of which a varying number of pages

(3-12) are advertisements. It is printed in 1000 copies per issue, of which 113 as paid subscriptions (1985). "Emballage et Conditionnement" has a limited, non-specified circulation outside Morocco, mainly in other Arab and African countries.

The editing is supervised by an editing committee including 4 IMEC staff members. The practical editorial work and the major part of the journalistic is carried out by the information officer, who is also in charge of advertisement sales.

The contents comprise

- small articles on new packages, mainly attained from the commercial sections of the US and French embassies,
- lists of coming events - exhibitions, conferences, IMEC arrangements,
- longer articles on packaging subjects, mainly based on general packaging knowledge,
- news about packaging standardisation, and
- reviews and references.

"Emballage et Conditionnement" is the only special packaging periodical regularly issued in the Arab world, and one of the few published in the 3rd world.

A packaging suppliers guide for Morocco has been published as a special issue of "Emballage et Conditionnement". Updated issues will be published every two years.

The aims of the bulletin is not clear, except its purpose to keep contact between IMEC and the Moroccan industry. The consultant has drafted a profile for the bulletin, reproduced as annex 8.

"Emballage et Conditionnement" is printed on IMEC's own one colour Heidelberg offset press. Black/white print preparation work is made at IMEC with excep-

tion of the type-setting of the Arabic parts. Arabic setting and colour work is bought from outside. The cover is printed on coated paper, the inside on uncoated paper. The illustrations reproduced on the uncoated pages are not up to the standard generally found in international packaging periodicals.

The attraction of the periodical would improve by increased use of photos and other illustrations, use of better quality and larger photos, and more action oriented illustrations. A reduction in the length of the articles, a variation in typographics and lay-out, and a more journalistic style could further bring the bulletin more in accordance with the general international trend. A professional lay-out of the advertisements would be an advantage. Such changes are possible within the limitations set by the printing equipment and the paper presently used.

A radical improvement would require use of coated paper throughout which would permit half-tone colour and high quality half-tone black/white printing of advertisements and illustrations. Such change should await increased advertising interest to justify the increase in costs.

1.2.5. A range of reports have been produced by IMEC, mainly for internal use and restricted circulation.

They include

- reports by international consultants (approx. 20)
- technical and development studies (approx. 20)
- handouts and other material from training activities (approx. 15)
- staff reports from overseas training (approx. 20)
- IMEC plans and programmes (approx. 15).

These reports constitute a part of the library's collection of report documentation.

2. The Arab Industrial Development Organization (AIDO)

2.1. Organisation and activities

AIDO was created in 1979 with the aims

- to contribute to the expansion and development of industry in the Arab world, both on state and regional basis and to co-ordinate Arab capabilities in the fields of manufacturing and extracting industries and electricity,
- to promote co-operation among the Arab countries in the areas of industrial development within the framework of a joint strategy of Arab economic action in conjunction with the developing countries and the industrially advanced nations,
- to undertake studies and research projects related to Arab industrial development strategy and to the planning, the implementation improvement of financing industrialization policies and programmes, and the technical supporting services, and the acquisition, storage, retrieval, and the dissemination of relevant data and information,
- to monitor international technical, scientific and economic developments, and to contribute to the protection of Arab interests, in these areas,
- to help the Arab states in developing the manufacturing industries, electricity and extracting industries through consultancy, technical assistance in the preparation of industrial development plans and projects, the conducting industrial surveys, the preparation of technical specifications for projects, the evaluation of international bids, assistance in negotiating with financing and investment institutions and the selection of equipment, the follow-up and evaluation of projects and the upgrading of productivity,
- to help in setting up and strengthening of all institutions serving Arab industry, research and development centers, and specialized institutes, and man-power development,

- to undertake studies and take all other actions which would help the Arab states to develop a scientific and technological base, at national regional level to acquire modern industrial technology and to develop systems for technology transfer,
- to take appropriate steps to bring about and develop inter-Arab industrial co-operation by helping to set up joint Arab industrial projects, and by preparing pre-investment studies for the purpose,
- to provide industrial documentation and information services involving selection, acquisition, storage, processing, retrieval and dissemination of the latest techno-economic information about the Arab industry and for the Arab industry in order to provide access to the latest international know-how to the Arab industries,
- to establish an Arab industrial data bank (ARIFO),
- to design and implement an integrated information system for the computerisation of Arab industrial information and to operate this system in co-ordination and co-operation with Arab states, organizations, specialized institutes and industrial federations,
- to facilitate the transfer of advanced technology to the Arab states and to train the staff to provide documentation and industrial information services,
- to co-ordinate and represent the viewpoints of Arab states on issues of industrial development in international conferences and in the various meetings involving Arab and non-Arab states,
- to organize and conduct conferences, seminars and meetings to discuss various aspects and problems of industrial development facing Arab countries, and
- to co-operate with related Arab and international organizations.

The organization consists of a ministerial board of directors and a Permanent Secretariat headed by a Secretary General.

The Council of the Organization consists of the representatives of all Member Arab States. Member States are represented by the Ministers of Industry or their equivalents, or their duly authorized representatives.

The Permanent Secretariat is the executive body of the Organisation. It is headed by the Secretary General who is assisted by such assistants and technical and administrative personnel as required to fulfill the aims of the Organization.

Mr. Hatem Abdul Rashed is the Secretary General of AIDO.

The organisational structure of the Permanent Secretariat is reproduced in table 3. The AIDO Permanent Secretarial staff is approx. 70 persons.

AIDO has a regional office in Algiers and is in the process of establishing permanent contact points with the ministries of industry of the member governments. AIDO offers assistance in establishment of national information centres. Such centres are under installation in Sudan and PDR Yemen, others are at different levels of preparation.

An internal packaging unit has been established at AIDO, at present consisting of

Mr. Hameed A. Al Joudi, co-ordinator

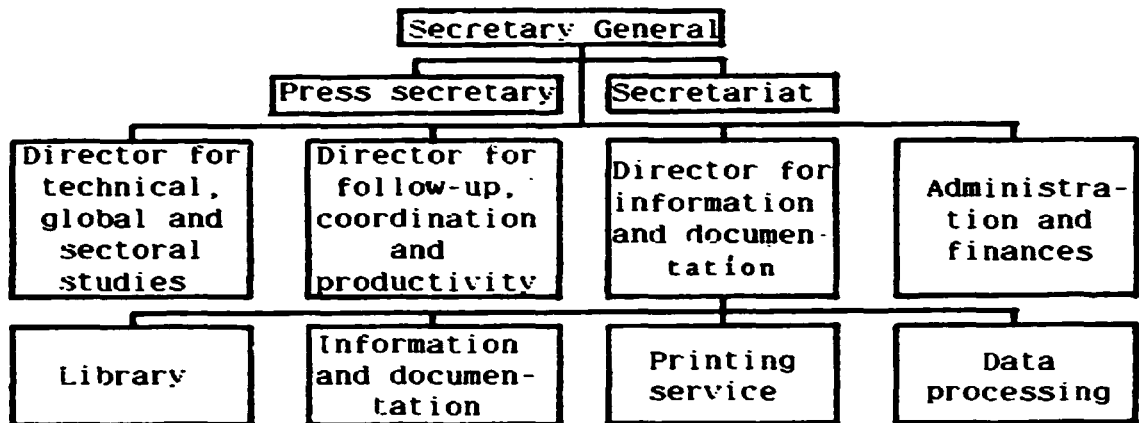
Mr. Abdul Malik Al-Kadhili, building materials technologist

Mr. Abdel Monein, expert in documentation

Mr. Mohamme Al-Daffai, expert in training

Mr. Ahmed Abbas, engineering industries technologist

Table 3. Organizational structure and information/documentation activities of the AIDO permanent secretariat



Activities of the dept. for information and documentation

Library

Aquisition/storage/retrieval
 Classification
 Library bulletin
 Users service
 Lending
 Microform library
 Audio-visual aids library

Information and documentation

Periodicals: Scanning/storage /retrieval
 Press clippings
 Current awareness service
 Enquiry service
 Translations
 Specialized bibliographies
 Directories
 Abstracts
 Microform
 Selected dissemination
 Training
 Defining external on-line data bases
 Technological data base

ARIFO net

Studies for establishment of information centres in Arab countries
 Unified thesaurus for industrial development terms

Printing service

Editing
 Press
 Distribution
 Designing
 Press service

Data processing

Analysis of systems in AIDO
 Establishment of data bases programming
 Data entry supervision
 Training
 System accounts management
 Data base maintenance
 Operating the system user services

2.2. Information and documentation activities

2.2.1. AIDO has a well organized technical library covering all major industrial activities. Books are mainly handbooks, directories and statistics, few only are technical textbooks. The main stock of documents are industrial reports, reports on industrial conditions in the Arab countries in particular. The packaging technical books identified in the library are listed in table 4.

A number of periodicals are subscribed to or received on a complementary basis. Some of the periodicals are represented by single copies or single annual volumes only. The high costs of technical periodicals have forced the library to reduce the paid subscriptions. Periodicals relevant to packaging identified in the AIDO library are listed in table 5.

Approx. 11,000 documents are entered in the library.

A collection of microfiches is established, containing all published UNIDO reports. The total microfiche stock is approx. 15,000. A microfiche reading equipment is established in the library, but no equipment for transfer of microfiches to hard copies.

All documents are registered by arrival, the periodicals on Kardex cards.

The users of the AIDO library are mostly AIDO staff members, university staff members and students, and government representatives. A review of the use of the AIDO library is reproduced in table 6.

2.2.2. An enquiry service is established serving the staff as well as enquirers in the Arab world. Enquiries

Table 4. Packaging relevant technical books identified in the AIDO library.

1. Anon.
Design and manufacture of plastic injection moulds. Productivity series No. 13. Asian Productivity Organization. Tokyo 1979
2. Sixten Olof Regestad (editor)
Energy conservation in the pulp and paper industry. Report of the symposium on energy conservation in pulp and paper industry 6-11 June 1983. Asian Productivity Organization. Tokyo 1983
3. Anon.
Small-scale paper making. ILO. Geneva 1985
4. Anon.
Packaging thesaurus. Arab Regional Packaging Centre Project, Casablanca
5. Anon.
UNIDO guide to information sources. Information sources on the packaging industry. UNIDO. Vienna 1977

Table 5. Packaging relevant periodicals identified in the AIDO library.

1. International Paper & Board Industry (until Dec. 1984)
2. Glass Industry (until May 1985)
3. Plastic Industry News (until Dec. 1985)
4. Metal Bulletin and Metal Bulletin Monthly (current)
5. Predi-briefs Containers and Packaging (current)
6. Predi-briefs Plastic Products (current)
7. Middle East Food Trade & Catering Equipment (current)
8. Fisheries. Quarterly Journal of the Arab Federation of Fish Producers (current)
9. Journal of the Arab Federation of Food Industries (current)

Table 6. No. of uses of the AIDO library 1981-86

	1981	1982	1983	1984	1985	1986
AIDO staff	410	1210	1222	1369	891	980
University students	28	49	128	88	235	275
Iraq ministries of ind.	12	49	77	61	82	62
E.S.C.W.A.		90	55	45	63	23
Specialized Arab fed.	15	29	30	41	36	39
Experts (UN and others)	30		31	36	88	68
University staff			13	15	17	14
Arab ministries of ind.				13	45	9
League of Arab States			16	13	17	4
A.L.O.	11	32	19	10	16	9
Arab Counc. for Sci. Fed.			11	8	23	11
Iraq Ministry of Planning			9	8	17	7
Sp. Inst. for Engin. Ind.	5	10	29	7	28	19
Iraq Ministry of Commerce					9	7
Arab embassies		15	27	5	13	16
Delegates, Arab meetings					112	64
Others, incl. industries	11	16	11	23	52	91
Total	522	1560	1678	1842	1744	1626

are received from governments, research and education institutions and individual industries in public and private sectors.

Few enquiries come from countries outside the Arab world.

All enquiries are registered using a standard form as reproduced in annex 6, section B.

Approx. 300 technical enquiries have been processed during the 4 years the service has been operative. 3-5 of the enquiries have contained packaging elements.

- 2.2.3. An in-house current awareness service is established. The service is based on a monthly document which is produced by photo-copying of selected technical articles relevant to the current activities of the AIDO permanent secretariat, market and price information, selected references and abstracts, information about coming events and copies of the tables of contents of selected industrial periodicals.

Each issue is approx. 60 pages. It is reproduced in 50 copies each. It is circulated to all professional staff members of the AIDO permanent secretariat, and to few selected contacts in Baghdad.

Included in the service is a follow-up requesting the staff members to express their opinion about the selection of information and wishes for subjects to be taken up.

The form has the advantage of good coverage with a moderate work load, and could be considered a form for circulation of packaging news to relevant industrial circles.

An in-house selected dissemination of information

system is established. It operates on the basis of information profiles drawn up in co-operation with each professional staff member. The profiles are revised once a year.

2.2.4. AIDO has published a range of sectoral and national bibliographies:

Iron and steel industries	1983, updated 1985
Petrochemicals	1983, updated 1985
Textiles	1983, updated 1985
Food industries	1984, updated 1985
Capital goods	1982, updated 1985
Electricity and electrical power prod.	1985

22 Arab national bibliographies and some smaller special bibliographies were published in 1984-85.

An Arab information sources directory and an Arab consulting offices directory have been issued.

A series of national forecasts for the packaging development has been prepared for AIDO by Saudi Consulting House.

3. Computer capacities

3.1. An IBM word processor with a number of administration functions has been installed at IMEC. The processor is working in French only. The components of the processor are listed in annex 5, section A. The processor operates with 256 kb 8" diskettes.

Efforts have been made to accommodate the processor for documentation handling and retrieval, but the structure of the machine has so far not allowed for its use for retrieval purposes. It is considered doubtful whether such use is possible.

The machine has no hard disk and any search is therefore limited to the information contained on

one diskette. As the total number of non-obsolete packaging abstracts to be accumulated at any time probably never will exceed 20.000 (approx. 4 Mb) would this limitation with the present load of enquiries be a minor problem only.

More serious is the limitation in relation to other information sources. The present diskette system is not able to communicate with other systems using 5 1/4" or 3 1/2" diskettes.

An equipment as specified for the ITC export packaging documentation scheme field station could be considered, also as a basis for co-operation within a future Arab packaging information programme. The price in Morocco of such equipment, including software is within 120-150.000 DH, excl. taxes.

As an alternative, the possibilities for access to, the advantages and disadvantages by use of an appropriate computer capacity on a service basis should be considered.

- 3.2. An extensive computer capacity has been installed at AIDO, mainly Hewlett-Packard. The specifications of the equipment are reproduced in annex 5, section B.

The equipment is suitable for documentation processing requiring storage of large quantities of data and efficient retrieval.

The equipment can easily communicate with other set-ups via diskettes or modem. The HP 150 and the IBM PC-XT can with small adaptations correspond with the ITC export packaging documentation scheme via 5 1/4" diskettes.

- 3.3. An potentially interesting partner in respect to co-operation is the ITC export packaging documen-

tation scheme. The scheme is not yet fully operative but approx. 1000 references have been entered into the data base in Geneva. Field stations are under installation, and a decision about association to the scheme should await practical experience with the operation.

Participation in the scheme will require access to a computer with a specification as reproduced in annex 5, section C.

4. The AIDO/UNIDO/IMEC packaging thesaurus

An AIDO/UNIDO/IMEC packaging thesaurus has been worked out at and distributed from IMEC. The thesaurus comprises 1778 key-words in French with translations into English and Arabic. The key-words are grouped into 12 main sections:

01. Sciences and fundamental technics (17 terms)
02. Information sources (38 terms)
03. Products to be packed (157 terms)
04. Economic, social and statutory aspects (358 terms)
05. Packaging functions (20 terms)
06. Packaging materials (262 terms)
07. Finished packages (132 terms)
08. Processes and techniques (285 terms)
09. Properties and phenomena (109 terms)
10. Packaging accessories (101 terms)
11. Equipment and industrial plants (161 terms)
12. Tests and controls (138 terms)

The key-words arranged alphabetically within each group according to their spelling in French with references from alphabetical indexes in English and Arabic.

Efforts have been made to comply with the need for a structural coherence by inclusion of references to "broad terms" and "specific terms". References are to some extent made to synonyms and to associ-

ated terms.

The thesaurus has been received by the AIDO library but it has not been in practical use there. It is used by the IMEC library where approx. 1000 primary documents, abstracted in French and chronologically numbered, have been classified according to the AIDO /UNIDO/IMEC thesaurus.

Problems have been observed by the IMEC library staff in classification of documents, e.g. due to lack of appropriate terms, and in retrieval.

To the consultant's opinion such problems are due to

- the size of the thesaurus and its unnecessary diversification into details, at the same time leaving many details uncovered,
- the insufficiency in respect to systematic, hierarchical structure adapted to the retrieval requirements, and
- the requirement of advanced knowledge of packaging technology in order to classify correctly and retrieve efficiently.

Moreover, some incorrect translations of the French terms into generally accepted English terms may create problems in non-French speaking countries.

The use of the thesaurus, by classification as well as by retrieval is unnecessarily time consuming, if used correctly. The result may therefore easily be adoption of less labourous but incorrect routines in order to overcome the work.

The high degree of diversification will further require frequent amendments of the thesaurus in order to accomodate to the development.

It has been experienced by the consultant as well

as others that establishment of proper packaging thesauri is extremely complicated due to the complex nature and diversification of the field of packaging.

If the AIDO/UNIDO/IMEC packaging thesaurus is abandoned three other solutions of the classification problem should be considered:

- establishment of a revised AIDO/UNIDO/IMEC packaging thesaurus, simpler, more systematic and more retrieval oriented than the present,
- acceptance of the ITC export packaging thesaurus under preparation, or
- adaption of the general AIDO technical thesaurus under preparation to cover packaging properly and concurrently preparation of a packaging extract operative for co-ordination of the packaging documentation work within the Arab packaging information programme.

Establishment of a revised specialized packaging thesaurus for the Arab world has the advantage that it can be fully adapted to the specific packaging requirements. It does have the disadvantages that it will not be compatible with other documentation activities, neither the ITC scheme which would give easy access to the references prepared by ITC, nor the AIDO general documentation system which would make the abstracts more useful for retrieval through the AIDO data base. It has further to be considered that preparation of a revised specialized packaging thesaurus for the Arab world would be costly in respect to international consultancy and computer hard-ware and soft-ware.

Adaption of the ITC export packaging documentation system has the potential advantage of easy access to the ITC packaging data base under establishment. This further has the advantage that it is based on IBM/PC/AT enhanced model computers communicating

by means of 5 1/4" diskettes.

The computer capacity installed at AIDO can be accommodated for such communication, and similar compatible equipment is available throughout the Arab world.

The IBM Visiotexte equipment installed at IMEC is not compatible with the ITC documentation system. It is a further disadvantage that the ITC packaging documentation scheme is not yet operational. One of the reasons for this is that the thesaurus for the scheme has not yet been finalized. ITC expects the start functioning during 1987.

The ITC scheme is based on reciprocity - the associated institutes will prepare abstracts in English of selected periodicals and classify them according to the ITC thesaurus as contributions to the scheme. The lack of practical experience makes it difficult to evaluate the practical consequences of participation in the ITC scheme.

Adaption of the general AIDO technical thesaurus under preparation to cover to a higher degree of diversification in the field of packaging would have the potential advantage of creating a direct entry of packaging information into a data base from where it may be retrieved together with other technical information relevant to a product. It would further have the advantage that primary information dealing with packaging aspects from sources other than traditional packaging documentation would be included automatically in the data base and made available for retrieval of packaging information. A disadvantage is the problem of establishing a proper packaging sub-system within the general technical thesaurus, a problem which former experiences have demonstrated is connected with great difficulties.

A wish for a hierarchial system which is most appropriate for packaging information retrieval may collide with wishes for an alphabetical system which may be more appropriate for use in other technical fields.

It also has to be realized that the AIDO general technical thesaurus is in its early state of development, and that its time of finalization is uncertain.

IV. CONCLUSIONS AND RECOMMENDATIONS

1. Packaging is a techno-economic activity affecting almost any economic unit serving the production and distribution of physical goods. Each decision in relation to packaging has its individual character due to the complexity of parameters involved. Practical experience has demonstrated that packaging decisions are most efficiently made decentralized by the individual units within the packaging supplying and using sectors of the economy.

The main objectives of collective efforts within the field of packaging is

- to secure that an appropriate background is established as a basis for suboptimal decisions,
- to secure that co-ordination of efforts is made to the benefit of the field of packaging as a whole when suboptimal decisions are unable to secure such co-ordination, and
- to secure that the packaging development serve the society as a whole, or at least do not violate vital social interests.

Appropriate decisions require appropriate information background and the decentralized nature of packaging decisions consequently requires widespread dissemination of packaging information. The individual character of packaging decision situations demands a considerable degree of target orientation of the information flow.

The main stream of packaging information flows along the trading channels, a system which in the industri-

alized countries is able to satisfy the major part of the demand for packaging information. Packaging documentation, packaging information institutions, packaging exhibitions and similar collective information dissemination systems play an important role as complements to the main stream of communication, but do not contribute new information to the stream.

Knowledge demands more knowledge. It is therefore seen that the professionals with a good packaging knowledge background are also those most interested in new information, including new information from the complementary sources. Reversely, are the least informed those who are the least interested in information. This situation is the prevailing in the developing countries, and extra efforts are therefore required in order to establish an appropriate interest in packaging information. Such interest can be established at the local level only, with the support of local individuals with a qualified professional interest in packaging development.

The efforts made hitherto to upgrade the packaging information level through joint Arab actions have shown limited results only. This may be due to insufficiency in mobilizing the local packaging interests.

2. The basis for an Arab packaging information programme should be a network of national packaging focal points, each with a contact network to the packaging suppliers and users, institutes, planning authorities and other professional packaging interests within the country. These primary packaging information users should be willing to contribute economically to the focal point and, moreover, demonstrate their sincere interest in the activity by participation in the management committee and by contribution of information. If such framework cannot be established, no national focal point should be appointed.

Each focal point should be managed by a management committee appointed by the focal point supporters and headed by a chairman who should not be a manager of the premise host or of the executive if this is a part-time. The packaging information focal point should work in close relation to the AIDO contact points where such are established, and with the national technical documentation centres/libraries.

The national packaging information focal point should, preferably, be established within the premises of a company, organisation or institution which can render practical support, and which has a status which is acceptable to the focal point contributors in respect to neutrality and efficiency.

Each focal point should have an executive who is paid for his/her focal point work by the focal point, and referring in this respect to the chairman of the management committee. The executive can be full-time or part-time, if so within a clearly defined framework in respect to time and service to be rendered. The packaging information focal point executive should have a proper technical background and training.

It is supposed that the running costs of the national packaging information focal points are fully met from national sources.

3. A superstructure should be established in order to support the national focal points.

Two types of support should be rendered

- a. Establishment service in the form of promotion of national professional interest, identification of the national packaging information needs, training of the packaging information focal point executive, organisation of the internal work and external activities, and

- b. After establishment current supply of relevant information and documentation back-up service.

The establishment service should be carried out as part of an establishment project for the Arab packaging information programme.

The superstructure should be established in the form of regional centres, each covering a geographical area which in respect to history, traditions, development, language, commercial relations and structure, communication form a unity of a certain homogeneous nature, and which a regional service centre can follow. Such regional areas could be the Gulf region, the Maghreb region, and one or two central regions.

Where packaging institutes are operational within a region should the regional packaging information centre be located with such institute. In regions where packaging institutes have not yet been established may other institutes with packaging activities and information dissemination capacity or regional technical information centres be assigned until a packaging institute activity is established within the region. It is suggested that the regional centres are established over a period, e.g. starting with the Maghreb region, in order to make full use of experience attained.

Each regional packaging centre should be managed by a board appointed by the national focal points associated with the centre. The chairman of the board should not be from the management of the host institute, or have a management position in respect to the regional executive in case this executive is part-time.

The regional packaging centre should have an executive, paid by the centre, who should be working full time in packaging. The executive may be part-time when needs and resources cannot justify a full time regional executive. The regional executive refer to the chairman

of the regional board in all matters related to the regional packaging centre.

A contract should be established between the regional centre and the host institute clearly specifying the services to be rendered by the host and the regional centre, the ownership of equipment and results, fees and terms of notice.

The regional packaging information centres will require funds for establishment as well as for covering the running costs. It is suggested that the establishment costs - staff training, consultancies, acquisition of initial and supplementary documentation and equipment are met through international assistance. After the initial period should the coverage of the running costs gradually be transferred fully to the participating focal points.

The long-term future of the regional packaging information centres depends upon the ability of the national packaging focal points to establish themselves, the technical and industry structural development within the field of packaging and the field of information technology.

The superstructure should further include a joint co-ordinating committee in which is represented the management committees of the national focal points, the boards of the regional centres, relevant Arab industrial federations and AIDO, with a part-time executive associated with the committee. The executive should carry out the decisions of the co-ordinating committee and refer to the chairman of the committee. The chairman of the committee should not be a manager of the company/organisation by which the executive is employed when not working for the co-ordinating committee.

The main task of the co-ordinating committee should be to create the framework for the establishment of the

network, to advise the regional centres and secure their building up of human and material resources, to supervise the proper and aggressive functioning of the national focal points and offer assistance when required, to establish a proper sharing of the work between the regional centres, to secure that the packaging information within the system is properly and safely accumulated and accessible to all professional interests in the Arab world, and to allocate and supervise the implementation of international, including joint Arab funds made available to the development of the programme within the rules established for the use of such funds. The coordinating committee is, moreover, recommended to seek membership of World Packaging Organisation as the regional Arab packaging organisation.

The function of the co-ordinating committee and its executive should be financed by joint Arab funding.

4. The activities of the Arab packaging information programme should include the issue of a regular Arab packaging newsletter to replace the ARPAC Packaging Bulletin. The newsletter should be in Arabic, regular (monthly), short (4 pages), easily conceivable, news oriented, journalistic, directed towards business circles and serve the purpose of creating packaging business within and between Arab countries.

The national packaging focal points should be encouraged to submit packaging news from their countries to the editor.

The contents should include

- coming events in the field of packaging - worldwide and in the Arab countries in particular - such as packaging and packaging related exhibitions, conferences, seminars, training programmes, etc,
- reference to important new books and reports in the field of packaging with indication of availability and price,

- reference to new standards and regulations of importance to packaging producers and users, exporters in particular with indication of availability,
- news about activities within the Arab packaging information programme,
- readers' enquiries and answers prepared by relevant professionals,
- information about new investments in the Arab countries in the fields of packaging raw materials, conversion and use,
- other packaging business news - new products, new persons, etc,
- "marriage announcements" with proposals for technical, financial and commercial co-operation within the field of packaging in the Arab countries,
- information about international prices of important packaging raw materials.

The newsletter should be published under the auspices of the co-ordinating committee, the actual editorial work and distribution to be carried out by one of the regional centres on a contract basis.

Only black/white illustrations should be included, and only such which can be reproduced by simple copying methods.

The manuscripts should be reproduced by the contractor and sent by mail in one copy each to the co-ordinating committee, the other regional centres and the national packaging information focal points for reproduction by photo-copying, stenciling or office offset, and circulation to the national networks. A copy of each national issue should be sent simultaneously to the co-ordinating committee for control.

5. Packaging suppliers guides should be issued on a regional basis in order to facilitate contacts between packaging suppliers and users, and promote trade between Arab countries.

A common systematic indexing system with alphabetic index (including synonyms) in Arabic, English and French, and a common questionnaire for collection of the information should be developed under the auspices of the co-ordinating committee, as part of the establishment project for the Arab packaging information programme.

Packaging suppliers guides should be issued only when the national packaging information focal points are able to collect representative information, and when the running costs can be covered without transfer of funds from the co-ordinating committee.

6. A selection of basic packaging textbooks should be supplied to the national packaging information focal points as part of the establishment procedure. A proposal for such a selection is reproduced in annex 9, section A. It is supposed that the national focal points update and extend their libraries according to the local needs on the basis of the reviews reproduced in the newsletter.

In order to keep the knowledge of the national executive up-to-date, and to give the local professionals access to a certain first-hand packaging information a small number of international packaging periodicals should be subscribed to. A list of such periodicals is also included in annex 9, section A.

An extensive selection of primary packaging documents should be established as part of each of the regional packaging information centres enabling the centres to submit photocopies of important documentation with short notice, and to give qualified advice to the packaging professionals within the region on the basis of the general packaging knowledge of the staff of the host institute in combination with the available documentation. A list of primary documents from which a selection can be made is reproduced in annex 9, section A.

It should be the responsibility of the co-ordinating committee to control that the regional centres have adequate primary documents and reproduction equipment at the disposal to fulfil their responsibilities vis -à-vis the national packaging information focal points.

7. A documentation service should be established based on the following principles:

a. All important documents relevant to packaging accumulated within the programme and with the institutions to which the national packaging information focal points and the regional centres are associated are registered, abstracted, classified according to the standard thesaurus for the programme.

Abstracts from external abstracting services (International Packaging Abstracts, Predicasts Containers and Packaging, ITC export packaging scheme) are utilized whenever possible in order to reduce the work load, taking into consideration the restrictions which such extractions impose on the publishing of the abstracts.

Abstracts in Arabic, English and French should be considered acceptable.

Collection and elaboration of abstracts can be initiated as soon as the establishment of the programme has been decided, awaiting classification when the revised thesaurus has been decided.

b. The classified abstracts are prepared decentralized by the regional centres according to contracts between the co-ordinating committee and the centres. These contracts also establish the responsibility in respect to supply of ITC classified abstracts in case co-operation with ITC is initiated.

The classified abstracts are submitted monthly by mail to AIDO for entering into the Arab technical documentation system, when operative, in order to

secure full utilization of the information throughout the Arab world. The abstracts may be submitted in written form or on diskettes/tapes which can be processed by the AIDO computer system.

- c. At the regional centres are established data bases containing all packaging abstracts registered within the AIDO technical documentation system and classified according to the standard thesaurus. The data bases are physically established within the institutions to which the regional centres are associated if appropriate computer capacity is installed, otherwise with a local documentation centre or computer service company.

AIDO prepares each month a diskette for each regional centre enabling the regional centres continuously to bring their data bases on par with the AIDO data base in respect to packaging documentation.

- d. Decisions on the computer technical aspects of the co-operation between AIDO and the regional centres are made by the co-ordination committee.

8. The export packaging documentation scheme under development by ITC should be considered a possible co-operation partner. An evaluation of this possibility should be part of the establishment project for the Arab packaging information programme. The scheme is based on exchange of information on 5 1/4" diskettes. The specification for a field station computer for the ITC scheme is reproduced in annex 5, section C.

In case the co-ordinating committee decides to join the ITC scheme a partner properly equipped should be appointed within the Arab packaging information programme. The processor at present installed at IMEC is not compatible with the ITC scheme and not appropriate for documentation processing, so investment funds of a size 120-150.000 DH should be provided in case IMEC is ap-

pointed ITC contact point. The installations at AIDO will require minor investments only to fit the ITC scheme.

9. A revised standard packaging thesaurus common for the Arab packaging information programme should be established on the following principles:
 - a. The packaging thesaurus is compatible with the thesaurus for the Arab technical documentation system at present under development at AIDO. Such compatibility will most probably best be established by inclusion of packaging elements on appropriate places in the general hierarchy of terms. The packaging thesaurus is then formed as an extract of the master thesaurus.
 - b. The revised packaging thesaurus is reduced in number of terms and more hierarchially arranged compared to the present in order to facilitate classification and make systematic retrieval practicable.

The revised packaging thesaurus should be worked out as part of the establishment project for the Arab packaging information programme, and decided by the co-ordinating committee.

10. A project should be set up for establishment of an Arab packaging information programme. The aims of this project should be:
 - a. Formulation of the organisational framework for the programme including the statutes regulating the superstructure (co-ordinating committee and regional centres) and the co-operation with the national packaging information focal points.
 - b. Establishment of the co-ordinating committee and its secretariat functions, selection and training of the executive, establishment of the co-operation with the regional centres on the basis of contracts and control procedures and establishment of external con-

tacts,

- c. Establishment and accomplishment of a training programme for the national packaging focal point executives,
- d. Evaluation of the possibilities for co-operation with the ITC export packaging documentation scheme and establishment of co-operation activities, if considered feasible,
- e. Establishment of a revised joint Arab packaging thesaurus,
- f. Evaluation of the possibilities for establishment of regional centres, definition of their geographical basis, selection of institutes to associate the centres with, assistance by appointment of the board members and the regional executives, assistance by establishment of budgets, working routines, co-operation with associated national focal points and the co-ordinating committee, and arrangement of the library and documentation functions. Moreover, on-the-job training of the regional executives and establishment of co-operation between the regional executives and the host institutes,
- g. Establishment of the Arab packaging newsletter, including the editorial line, selection and training of the editor, establishment of contacts to suppliers of information, including the national focal points,
- h. Establishment of an indexing system and questionnaire for packaging suppliers guides, production of promotion material and elaboration of budgets and financing plans for the regional guides,
- i. Formulation of standard framework for national packaging information focal point statutes and other background material for the establishment of the

national packaging information focal points,

- j. Production of propaganda material for campaigns for establishment of national packaging information focal points and accomplishment of such campaigns in selected Arab countries,
- k. Establishment of national packaging focal points, assistance by formulation of statutes, appointment of the managing committees and selection of the executives, establishment of budgets and working routines, including manifolding and distribution of the newsletter, establishment of co-operation with national professionals and the regional centre, and arrangement of library and documentation functions. Moreover, on-the-job training of the executives and assistance in the follow-up campaigns for supporters and promotion of the regional packaging suppliers guides.

The establishment project should be carried out under the responsibility of an organising committee with equal representation of government and industry representing a broad aspect of professional packaging interests. An international expert should be attached with the project and work in close contact with the coordinating committee executive in spe. A draft job description for the international expert is attached as annex 8.

Annex 1. Job description for the mission

UNITED NATIONS



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO 9 October 1966

PROJECT IN THE ARAB STATES

JOB DESCRIPTION

DP|RAB|83|020|11-03|31.7.E.

Post title Expert in Packaging Information and Documentation

Duration 2 months (2.0 m|m)

Date required As soon as possible

Duty station Casablanca, the Kingdom of Morocco (50%) and Baghdad, the Republic of Iraq (50%), with possibility of travel to other Arab States.

Purpose of project The project aims at the development of the packaging and related industries in the Arab region through the establishment and advancement of the Arab Regional Packaging Centre, identification and promotion of national packaging centres|laboratories, establishment of a packaging information system, etc. The specific purpose of the mission is to elaborate a packaging information programme for the Arab countries and its effective coverage of the beneficiary target audience groups in the region.

Duties The expert will be assigned to the UNIDO project entitled "Establishment of the Arab Packaging Centre", work as a team member under the Chief Technical Adviser and in close co-operation with the counterpart Project Director.

1. Get acquainted with the means and systems already available in the Moroccan Packaging Institute (IMEC) and at the Arab Industrial Development Organization (AIDO), for packaging information purposes, bearing in mind the fact that the main role on packaging information and documentation for the Arab countries is expected to go on at IMEC.
2. Prepare a detailed programme including methodology, identification of services of information on packaging technology and industries within the region, list of focal points and other concerned interests for development of two way exchange of information. Elaborate and|or review a system of abstraction, classification, storage and retrieval of information and suggest

Applications and communications regarding this Job Description should be sent to:

Project Personnel Recruitment Section, Industrial Operations Division
UNIDO, VIENNA INTERNATIONAL CENTRE, P.O. Box 300, Vienna, Austria

cost effective measures for dissemination of information to the user/target groups.

3. Help set up an operational packaging information centre at the regional level within the frame of the project. Co-operate in the elaboration and improvement of monthly/quarterly packaging bulletin in Arabic.
4. Give ad-hoc advice and co-operate on specific subjects within the field of packaging information and documentation whenever specifically requested to do so.

The expert will be expected to prepare a mission report setting out his findings and recommendations to AIDO for further action which might be taken.

Qualifications Packaging technologist with a University degree or equivalent qualifications and with specific experience in packaging information and documentation.

Language Arabic and French (English an asset)

Background information The Arab Industrial Development Organization as an implementing agency for the Arab Governments and UNIDO as an executing agency for the United Nations, are jointly carrying out the project with the aim of establishing an Arab Regional Packaging Centre. It is also intended to promote and develop packaging centres/laboratories at the national levels as an integral part of the development of the packaging industries in the Arab States.

For this purpose, the Moroccan Packaging Institute (Institut Marocain de l'Emballage et du Conditionnement - IMEC) through the Royal Government of Morocco is hosting the project. During the last two years, a number of important activities were undertaken in Morocco and in some selected countries to upgrade important capacities in the field of packaging.

The regular and efficient performance of packaging information services has been considered to be a priority function of the project.

Annex 2. Principal contacts established during the mission

1. Arab Industrial Development Organization (AIDO)
Al-Saadoon Street
P.O. Box 3156
Baghdad, Iraq

Phones + 964 1 7184655 & + 964 1 7187059
Telex 2823 aido ik

Mr. Adnan Al Kindi, Director
Mr. Hamid Al Joudi, Packaging Unit Co-ordinator
Mr. Saïd Lishani, Information and Documentation Section
Manager

Mr. Tewfik Mansoor, Head of Library
Mr. Mahmoud Zaddem, Head of Information Section
Mrs. Majda Alusi, Head of Computer Centre

2. Institut Marocain de l'Emballage et du Conditionnement
(IMEC)
Km 9.5 Route de Nouaceur, Bouscoura
Casablanca, Morocco

Phones + 212 362501, + 212 362266 & + 212 365950
Telex 24086 imec m

Mr. Zaki Ali, Director General
Mr. Mustapha Hammi, Director Development
Mr. A. Chabani, Head of Department for Training,
Documentation and Information
Mlle Toufik, Information and Documentation Officer
Mme Benmousda, Librarian
Mme Alami, Visiotext Operator

3. La Sphère Informatique
IBM Distributor
190, avenue Mers Sultan
Casablanca, Morocco

Phones + 212 222694, + 212 273453 & + 212 272451
Telex 22764 m

Mr. Mustapha Amri, Director General

Annex 3. Addresses of packaging relevant joint Arab, regional
and national institutions and organisations

Joint Arab organisations

1. League of Arab States
Chedli Klibi
37 ave Khereddine Pacha
Tunis, Tunisia

Phone + 216 1 890100
Telex 13241 tn & 13242 tn
2. Arab League Educational, Cultural and Scientific
Organization (ALECSO)

P.O. Box 11230
Al-Qabadha Al-Asliya
Tunis, Tunisia

Phones + 216 1 892303 & + 216 1 892461
3. Arab Industrial development Organization (AIDO)
Al-Saadoon Street
P.O. Box 3156
Baghdad, Iraq

Phones + 964 1 7184655 & + 964 1 7187059
Telex 2823 aido ik
4. Arab Organization for Agricultural Development (AOAD)
Jamaha Street
P.O. Box 474
Khartoum, Sudan

Phones Khartoum 78764 & Khartoum 78960
Telex 22554 km
5. Arab Organization for Standardisation and Measures (ASMO)
P.O. Box 926161
Amman, Jordan

Phones + 962 6 63834/6
Telex 22463 asmo jo
6. Arab Postal Union (APU)
P.O. Box 7999
Dubai, United Arab Emirates

Phones + 971 4 660508 & + 971 4 667751
Telex 46284 upasg em
7. Arab Civil Aviation Council (ACAC)
17 Al-Nasr Street
P.O. Box 4410
Rabat, Morocco

Phones + 212 7 74178 & + 212 7 74187
Telex 32817 m
8. Arab Air Carriers Organization (AACO)
3rd Floor, American Life Insurance Bldg.
Airport Avenue
P.O. Box 1107349
Beyrouth, Lebanon

Phones + 961 1 277710, + 961 1 277711 & + 961 1 277712

9. Association of Arab Institutes and Centres of Research
for Economic and Social Development (AICARDES)
c/o Institut d'économie quantitative
2 rue BENGHAZI
Tunis, Tunisia

Phones + 216 1 283214, + 216 1 283216 & + 216 1 287097

10. Arab Union of Railways (AUR)
P.O. Box 6599
Aleppo, Syria

Phones + 963 21 220302 & + 963 21 220303
Telex 331009 sy

11. Arab Federation of Shipping (AFS)
P.O. Box 1161
Baghdad, Iraq

12. Arab Academy for Maritime Transport (AAMT)
P.O. Box 1552
Sharjah, United Arab Emirates

Phone + 971 6 358866
Telex 68167 academ em

13. General Union of Chambers of Commerce, Industry and
Agriculture for Arab Countries (GUCCIAAC)
P.O. Box 11-2837
Beyrouth, Lebanon

Phones + 961 1 814269 & + 961 1 814270
Telex 20347 chucha le

14. Arab Federation of Food Industries (AFFI)
P.O. Box 13025
Alwiyah, Baghdad, Iraq

Phone + 964 1 7760195

15. Arab Federation of Fish Producers (AFFP)
P.O. Box 15064
Al Yarmouk, Baghdad, Iraq

Phone + 964 1 5511261
Telex 3327 afish ik

16. Arab Sugar Federation (ASF)
P.O. Box 195
Khartoum, Sudan

Telex 22665 km

17. Arab Federation of Chemical Fertilizer Producers (AFCFP)
P.O. Box 23696
Safat, Kuwait

18. Arab Iron and Steel Union (AISU)
Route de Chéraga
P.O. Box 4
Chéraga, Algiers, Algeria

Phones + 213 781579, + 213 781580 & + 213 782705
Telex 52553 sobelara dz

19. Arab Federation of Textile Industries
P.O. Box 620
Damascus, Syria

20. Arab Federation of Paper Industries
P.O. Box 5456
Baghdad, Iraq

Regional organisations

1. Gulf Organization for Industrial Consulting (GOIC)
P.O. Box 5114
Doha, Qatar

Phones + 974 321461, + 974 321462 & + 974 321463
Telex 4619 goic dh

2. Centre d'études industrielles du Maghreb
P.O. Box 235
Tangier, Morocco

National institutions and organisations

1. Inter-ministerial Commission on Packaging
Ministry of Commerce
Algiers, Algeria

Phones + 213 663366 & + 213 666532

Att. Mr. Alem Mostafa, Director I/c Regulations &
Normalisation

2. General Organisation for Industrialization
6, Khalil Agha Street
Cairo, Egypt

Telex 23389 un

Att. Dr. Mongi M.A., Deputy Chairman

Egyptian Packaging Development Association
3, Behlar Passage, Kasr El Nil Street
Cairo, Egypt

Att. Mr. A. Elasfour

3. Ministry of Light Industries
Baghdad, Iraq

Telex 2249 ik

Att. Mr. Ali Alabadi

General Federation of Industry and Commerce
Khullany Square
Baghdad, Iraq

4. Federation of Packaging Industries in Lebanon
P.O. Box 1520
Beyrouth, Lebanon

5. Ministry of Industry
Rabat, Morocco
Att. Mr. El Mossadeq, Director Industries

Institut Marocain de l'Emballage et du Conditionnement
(IMEC)
Km 9.5 Route de Nouaceur
Bouscoura
Casablanca, Morocco

Phones + 212 362501, + 212 362266 & + 212 365950
Telex 24086 m

Att. Mr. Zaki Ali, Director General
6. Ministry of Industry and Electricity
Protection and Encouragement Dept.
Riyadh, Saudi Arabia

Telex 401154 sj

Att. Mr. Essam Al Mahdy, Director
7. Ministry of Commerce
Maghdeshu, Somalia

Att. Mr. Abdurahman M. Yusuf, Director

Ministry of Fisheries and Marine Resources
Maghdeshu, Somalia

Telex 21256 minfish maghdeshu

Att. Mr. Mohd. Salah, Permanent Secretary

Ministry of Industry & Commerce
Maghdeshu, Somalia

Telex 747 maghdeshu

Att. Mr. Ali Harsi Osman, Director
8. Ministry of Industry
Khartoum, Sudan

Phones Khartoum 80136 & Khartoum 80530

Att. Mr. Abdul Razik Khatib, Undersecretary
Mr. Adam Mousa, Director
9. Syrian Arab Organization for Standardization and Metrology
P.O. Box 11836
Damascus, Syria

Phone + 963 11 450538
Telex 411999 sasmo sy
10. Ministry of Industry and Commerce
95, rue de la Kasbah
Tunis, Tunisia

Phones + 216 1 262247 & + 216 1 661361

Att. Mr. Salah Fessi, Director

11. Comité National de l'Emballage et du Conditionnement
c/o Vice Ministre de l'Industrie, du Commerce et de
l'Approvisionnement

Crater P.O. Box 300

Aden, Yemen P.D.R.

Telex 2273 yd

Annex 4. Abstracting forms

Section A. Abstracting form used at IMEC

Code numero	Rubrique	Cote
_____	_____	_____
_____	_____	_____

Titre français :

Titre original :

Auteurs :

App.Auteurs :

Nat. du doc / non de revue :

Vol. ou N°	19	P	(L)	FIG.	Tabl.
Ref. Photoqr. Ed					

Observation	Mots clés

Section B. Abstracting form used at AIDO

ARAB INDUSTRIAL
DEVELOPMENT ORGANIZATION



المنظمة العربية
للتنمية الصناعية

DOCUMENTATION		WORK-SHEET	
أيدو AIDO		ARIFO	
التوثيق		ورقة عمل	
:Call Number رقم الطبعة	A122	:Biographic Level M A C S	:ISN الرقم
:Access Number رقم التسجيل	E130	:S.C.Date تاريخ وضع المطوع	E122
:Document Number رقم الوثيقة	E100	:ISSN تدمر	B430
:Availability الأتاحة	B810	:Thesaurus Facet Number رقم التمكنز	E540
		:Language اللغة	B540
		:Title العنوان	B230
:Meeting No. رقم الاجتماع	B715	:Meeting Name عنوان الاجتماع	B711
:Meeting Date تاريخ الاجتماع	B714	:Meeting Cou. Code شفرة البلد	B713
		:Location المتان	B712
		:Author (Corp.) المؤلف (هيئة)	B220
		:Author (Personal) المؤلف	B210
		:Title العنوان	B330
		:Author (Corp.) المؤلف (هيئة)	B320
		:Author (Personal) المؤلف	B310
:Date of Imprint/Issue تاريخ النشر	B620	:Vol. Part No. Collection رقم الممدد - المجموعة	B340
		:Publisher ناشر	B611
:Edition الطبعة	B670	:Year of Imprint سنة النشر	B630
		:Location المتان	B612
		:Notes. Collation ملاحظات	B642
		:Collation. Pages الصفحات	B641
		:Ancillary data بيانات إضافية	B820
		:Descriptors الكلمات الدالة	C210
		:Checked by إسم المراجع	E610
		:Described by إسم المحلل	E600

Annex 5. Computer capacities

Section A. IMEC Visiotext word processor

Processor: IBM 480
8" disk drive: IBM 6360
Printer: IBM 5218 A02

Section B. Computer capacity installed at AIDO

HP 3000/40 MINICOMPUTER		QTY

1- CPU	1.5 Mgbyte	1
2- Disk Drive	120 =	2
	404 =	1
3- Tape Drive		2
Density 1600 byte/inch		
4- Terminals 2622 + G06		1 L + 7 A/L
5- Line Printer	2608A	1 A/L
	2563	2 A/L

SOFTWARE

- 1- IMAGE/QUERY
- 2- V/+
- 3- Transact
- 4- Dictionary
- 5- Minisis
- 6- Fortran + Cobal + RPG II + Pascal + SPL
- 7- Operating System MPE V
- 8- Ksam-Utilities

HP 150 MICROCOMPUTER X2

-
- 1- CPU 512K
- 2- Floppy Disk Drive
- 3- Hard Disk Drive (Winchester) 20 Mgbyte.
- 4- Laser-get Printer Arabic/Latin
- 5- Terminal 150 (Touch Screen) Arabic / Latin

SOFTWARE

- 1- O.S. MS/DOS
- 2- Wordstar
- 3- Arabword
- 4- Memomaker
- 5- Lotus 1-2-3
- 6- Arabcalc
- 7- Basic

HP 125 MICROCOMPUTER

-
- 1- CPU 512K
- 2- 2 Floppy Disk Drive
- 3- Printer English only
- 4- Plotter
- 5- Terminal 125 English only

SOFTWARE

- 1- O.S. CPM
- 2- Visicalc
- 3- Link 125
- 4- Word Processor
- 5- Graphics
- 6- Basic

IBM PC - XT MICROCOMPUTER

- 1- CPJ 512K
- 2- Floppy Disk Drive
- 3- Printer
- 4- Display Terminal

Software

- 1-O.S. MS/DOS
- 2- Basic
- 3- Comfar

Section C.

PROPOSED SPECIFICATION FOR FIELD STATION EQUIPMENT RELATED TO THE
ITC COMPUTERIZED INFORMATION SERVICE IN EXPORT PAKAGING

1. System Unit: IBM/PC/AT Enhanced Model with:
 - 16/24 bit INTEL 80286 Microprocessor
 - 512 KB RAM 64 KB ROM
 - 84 Key Enhanced Keyboard (KEYTRONIC)
 - Diskette/Fixed Disk Adapter
 - 1.2 MB Diskette and 3.60 KB Diskette Drive
 - 30 MB Fixed Disk Drive
 - Serial/Parallel Adapter
 - System Clock Calendar with Battery Back-up
 - Keylock
2. IBM Graphic Card
3. PERIPHERALS
 - IBM Monochrome Display
 - One letter quality printer (type EPSON LQ-1500, 40/50 cps)
 - One high-speed printer (type INKJET, 200 cps)
 - Printer Cable
 - Anti-glare protective screen
4. Operating System
 - Disk Operating System or DOS 3.1
5. Battery pack UPS
 - Model BP-03B (33 minutes) or equivalent
6. Printer Stand
7. Software
 - DBASE III PLUS
 - DW3 (English)
 - VISIO 3 (If French is necessary)
8. Expandable Equipment
 - Diskettes for IBM/PC/AT Quad density MAXELL (10 units)
 - Ribbons for the printer (6 units)
 - Continuous listing paper, unprinted size A4 (4 boxes)
 - Continuous listing paper, unprinted size A3 (2 boxes)
 - Self adhesive labels for mailing lists and printed letterheads in continuous forms as required.

Updated version, as of 12.12.1986 (in consultation with Mr. B. Ancel)

Annex 6. Enquiry forms

Section A. Enquiry form used at IMEC

INSTITUT MAROCAIN DE L'EMBALLAGE
ET DU CONDITIONNEMENT

SERVICE QUESTIONS - REPOSES

DEMANDE D'INFORMATIONS

Sujet de la demande :

But de la demande :

Délai possible :

Modalités de réponse : note écrite - documents à communiquer - téléphone -
telex

Nom du demandeur :

Spécialité :

Fonction :

Nom de l'organisme :

Activité :

Adresse :

Ville :

Pays :

Tél. :

Télex :

Section B. Enquiry form used at AIDO

المنظمة العربية للتنمية الصناعية

ENQUIRY WORK-SHEET
ISTIFSAR DATABASE

ورقة عمل الاستفسارات
قاعدة استفسار

/ / تاريخ Date		Q 020	رقم الاستفسار : Enquiry No.	Q 010	ISN :
			اسم الحقل : Field name	Q 032	شفرة الحقل : Field code
			اسم المتكلم : Enquirer name	Q 041	اسم المتكلم وعنوانه Enquirer name & Address
			عنوان المتكلم : Enquirer address	Q 042	
			موضوع الاستفسار : Subject of enquiry		Q 050
Nb & date of letter/enquiry		رقم وتاريخ الكتاب/ الاستفسار		Q070	
		تاريخ الاستفسار : Date of enq. letter	رقم الاستفسار : Number of letter	Q 072	Q 071
			خلفية وتحليل الاستفسار : Background & analysis of enquiry.		Q 100
			الكلمات الدالة : Descriptors		C 210
مراجع اخرى Other references	مستخلصات اليونيدو UNIDO abstracts	مراجع المكتبة Library references	وشائق أيدو AIDO documents	الوشائق، قاعدة المعلومات Documents, D. Bases	Q 121
				الوشائق Code of documents	Q 122
				الارقام Numbers	Q 123

Specialized Institutions <u>جهات الاطلاع على</u>		Q 200				
:Name of organization <u>اسم الجهة</u>		Q 201				
:Country <u>البلد</u>		Q 202				
:No & date of letter <u>رقم وتاريخ الكتاب</u>		Q 203				
:No & date of answer <u>رقم وتاريخ الرد</u>		Q 204				
Information, Prep. & Dissem. <u>اعداد وبت المعلومات</u>		Q 220				
Q 223 رقم الصفحات No of pages	: Type of Inform. sent <u>نوعية المعلومات المرلة</u>	Q 222				
Q 225 تاريخ الاسترجاع Feed-Back date	: ملاحظات الاسترجاع : Feed-Back Remarks	Q 224				
Time/Cost of Information <u>وقت وبعر المعلومات</u>		Q 250				
اخرى Others	الطبوع والانتاج Typing / Copying	تحضير المعلومات Information preparation	جمع المعلومات Information collection	بحث وتحليل المعلومات Information analysis & search.	النشاطات Activities	Q 251
					تاريخ البدء Starting date	Q 252
					تاريخ الانتهاء Ending date	Q 253
					الوقت الكلي Total time	Q 254
					ملاحظات Remarks	Q 255
					المعسر cost	Q 256
تاريخ الإدخال ++ : Date	E 100	: الباحث : Researcher	Q 270	: إجمالي التكلفة : Total charge		Q 260
: المراجع Checked : by	E 620	: المدخل Entered : by	E 610	: تاريخ التحليل : Processing date		Q 280

Annex 7. Draft for an editorial profile for "Emballage et
Conditionnement"

1. The bulletin is the porte-parole for the packaging professionals in the francophone North/West Africa.

In order to achieve this an editorial committee is established representing packaging producers and traders, packaging users, transporters and other packaging related service industries within the region, and IMEC.

This aim is promoted by extended use of interviews of North/West Africa packaging professionals, articles written by named North/West African packaging professionals, and editorials dealing with problems facing parts of the packaging sector or the sector as a whole, also in a provocative form. Initiatives are taken by the editors to request North/West African packaging professionals to comment in the bulletin on articles published in the bulletin and in other media.

The status of the bulletin as a porte-parole for packaging professionals is promoted by issue of press releases on important articles published in the bulletin.

2. The bulletin is the news media about packaging in francophone North/West Africa.

It is the aim to secure that all important packaging news about the region is published in the bulletin. Such news include

- new packaging production and packing installations in North/West Africa,
- new types of packaging produced or introduced in North/West Africa,
- news about persons in packaging in North/West Africa,
- news about financial relations between North/West African companies, and between North/West African and foreign companies,
- news about legal initiatives in North/West Africa in-

fluencing packaging development.

- short reports from meetings, conferences, exhibitions, etc. in North/West Africa dealing with packaging and related subjects, and
- news about packaging standardisation in North/West Africa with short editorial comments.

The aim is achieved by persistent writing and personal approach to the potential news suppliers - mainly the packaging industries. These industries within the region are not used to expose themselves in public, and years of hard work initiatives are required to build up the public relations awareness.

3. The bulletin is the media keeping the packaging producers and users in francophone North/West Africa informed about general international developments in the field of packaging especially those areas of special interest to the region's trade.

This aim is attained by

- contact to the agents in North/West Africa for foreign packaging and packaging machinery manufacturers and directly to manufacturers not represented. Much information is published by manufacturers as press releases which are obtainable at the press stands of international packaging exhibitions and/or by application for inclusion in the press mailing lists of such manufacturers,
- establishment of personal contacts between the editorial/journalistic staff and overseas packaging professionals in industries and institutes, and editorial/journalistic colleagues working for packaging periodicals, and
- membership of IPPO, International Packaging Press Organization.

4. The bulletin is a media for promotion of packaging trade between francophone North/West Africa and the Arab world as a whole.

This aim is achieved by publishing reports about packaging and related subjects in other Arab countries produced by the local packaging focal points, the packaging industries in the Arab world and exporters of packaging raw materials, packaging, packed products and equipment from other countries to the Arab world.

The bulletin contains a French language section and an Arab language section. No articles appear in both sections. The distribution between the two languages follows the general commercial language trend within the region. A 100% Arabic bulletin is foreseen as a final stage.

5. The bulletin is the news media about IMEC and the packaging focal points established in francophone North/West Africa.

This aim is achieved by printing

- information about coming IMEC events, including courses, seminars, research projects, etc.,
- short reports from accomplished activities,
- news about persons affiliated to IMEC and the focal points - election of board members, new staff members, promotions, birthdays, overseas training, foreign expert missions, etc.,
- stories related to new equipment, new service possibilities,
- short reviews of new important documents in the libraries, and
- notes on important decisions made by the boards of directors, important contracts, work plans, etc.

6. The bulletin has an identity of its own.

This aim is achieved by

- a high degree of autonomy of the editing committee in regard to policy and profile of the bulletin, selection of information and lay-out, within the economic framework established by IMEC as publisher, and
- use of letterhead and other stationery specific to the bulletin.

Annex 8. Draft job description for an expert in packaging information dissemination

Post title Expert in packaging information dissemination

Duration 12 months (12.0 m/m), in two periods

Date required To be decided

Duty station To be decided

Purpose of project The project aims at the development of the packaging and related industries in the Arab region through the establishment and advancement of the Arab regional packaging activity, identification and promotion of national packaging centres/laboratories, establishment of a packaging information system, etc. The specific purpose of the assignment is to develop a packaging information programme for the Arab countries and its effective coverage of the beneficiary target audience groups in the region.

Duties The expert will be assigned to the UNIDO project entitled "Establishment of the Arab Packaging Centre", work as a team member under the Chief Technical Adviser and in close co-operation with the counterpart executive. In particular he will be expected to:

1. Formulate draft rules for the work of the Arab Packaging Information Co-ordination Committee and the regional packaging centres. Moreover, draft a framework for statutes of national packaging focal points to act as the basis for the Arab packaging information programme.
2. Assist the organizing committee in
 - setting up the Arab Packaging Information Co-ordination Committee and the boards of the regional packaging information centres,
 - selection of host institutes for the regional centres,
 - establishment of the secretariat and the executive functions of the Arab Packaging Information Co-ordination Committee and the regional centres, and
 - training of the executives assigned with the Arab Packaging Information Co-ordination Committee and the regional centres.
3. Draft contracts for cooperation between the Arab Packaging Information

Co-ordination Committee and the regional packaging information centres.

4. Assist national packaging focal points in establishing the information functions and the relations to the packaging professionals in their countries, and in on-the-job training of the executives.
5. Design and carry out a training programme in cooperation with IMEC for the national packaging information focal point executives.
6. Evaluate the possibilities and conditions of cooperation between the ITC export packaging documentation scheme and the Arab packaging information programme, and - if appropriate - draft an agreement with a regional centre on practical execution of the cooperation, including arrangement of proper computer capacity.
7. Draft a structured list of packaging terms which can be part of the general Arab technical documentation thesaurus at present under development at AIDO.
8. Assist the establishment of an Arab packaging newsletter to be distributed through the national focal points, including establishment of information supply sources.
9. Assist the establishment of regional packaging suppliers guides, including establishment of a joint indexing system, a questionnaire form and promotion material, promotion campaigns, and draft budgets and financing plans for such guides.
10. Design propaganda campaigns and work out information material for establishment and expansion of national packaging information points, and assist in carrying out campaigns in selected Arab countries.
11. Give ad-hoc advice and cooperate on specific subjects within the field of packaging information and documentation whenever specifically requested to do so.
12. Prepare a mission report setting out his findings and recommendations to AIDO for further action which might be taken.

Qualifications

Packaging technologist with a university

degree or equivalent qualifications and with specific experience in packaging information dissemination and documentation.

Language

English and French, Arabic an asset.

Annex 9. Selected packaging documentation

Section A. Basic textbooks, catalogues and periodicals

Textbooks and catalogues

Author:

Title: DRUPA Catalogue, latest edition

Publisher: NOWEA

Author:

Title: ECMA Code, 1978, 128 p

Publisher: European Carton Makers Association

Author:

Title: Export Packaging Notes No. 11 to No. 21

Publisher: International Trade Centre

Author:

Title: Export packaging standards, 1980, 30 p

Publisher: British Fibreboard Packaging Association

Author:

Title: Glass container in packaging

Publisher: Indian Institute of Packaging

Author:

Title: Guide to heat sealing polyethylene film, 1974, 7 p

Publisher: PIFA

Author:

Title: Glossary of packaging terms, 5th ed, 1979, 214 p

Publisher: Packaging Institute

Author:

Title: Guide to the use of plastic films in packaging, 14 p

Publisher: British Plastics Federation

Author:

Title: 100 samples of paper and board. Sample book and audio cassette

Publisher: National Association of Paper Merchants

Author:

Title: Interpack Catalogue, latest edition

Publisher: NOWEA

Author:

Title: Introduction to tensional strapping, 9 p

Publisher: British Tensional Strapping Association

Author:

Title: Low density polyethylene film for general packaging applications, 1980, 11 p

Publisher: PIFA

Author:

Title: Manufacture of woven sacks from natural and synthetic fibre, 1975, 40 p

Publisher: Tropical Products Institute

Author:

Title: PAKEX Catalogue, latest edition

Publisher: Industrial and Trade Fairs Limited

Author:

Title: Paper and paperboard in packaging, 1973

Publisher: Indian Institute of Packaging

Author:

Title: Plastics in packaging, 1984, 487 p

Publisher: Indian Institute of Packaging

Author:

Title: Polyethylene film for shrinkwrapping, 1981, 10 p

Publisher: PIFA

Author:

Title: Quality specifications for domestic and export
shipment fibreboard packaging

Publisher: British Fibreboard Packaging Association

Author:

Title: Salon de l'Emballage Catalogue, latest edition

Publisher: SEPIC

Author:

Title: Users guide to blow-moulding plastic containers
1980, 15 p

Publisher: British Plastics Federation

Author: Baker, M

Title: Encyclopedia of packaging technology

Publisher: John Wiley and Sons

Author: Benning, C J

Title: Plastic films for packaging, technology, appli-
cations and process economics, 1983, 181 p

Publisher: Technomic

Author: Cooper, J

Title: Plastic containers for pharmaceuticals. Testing
and control, 1974, 204 p

Publisher: WHO

Author: Debney, H G

Title: Handling and storage practices for fresh fruit and
vegetables, 1980, 77 p

Publisher: Newman & Associates

Author: Dullinger, K

Title: Kronos manual of labelling technology, 1978, 222 p

Publisher: Herman Kronseder Maschinenfabrik

Author: Friedman, W F

Title: Distribution packaging, 1977, 558 p

Publisher: R. E. Krieger

Author: Hanlon, J F

Title: Handbook of package engineering, 1983

Publisher: McGraw-Hill

Author: Langbridge

Title: Corrugated fibreboard boxes. Their use in packaging fresh fruit and vegetables in Australia, 1983, 155 p

Publisher: Australian Paper Manufacturers

Author: Lopez, A

Title: Complete course in canning, 11 ed., vol 1-2, 1981, 1056 p

Publisher: Canning Trade

Author: O'Leary

Title: Folding cartons, their properties, production and problems in Australia, 1983, 119 p

Publisher: Australian Paper Manufacturers

Author: Collins, C R

Title: Elastic film and packaging, 1975, 214 p

Publisher: Applied Science Publishers Ltd.

Author: Paine, F A

Title: Fundamentals of packaging, 1981, 235 p

Publisher: Institute of Packaging

Author: Paine, F A

Title: Handbook of food packaging, 1983, 220 p

Publisher: Leonard Hill Distributor

Author: Paine, F A

Title: Packaging media, 1977, 554 p

Publisher: Blackie & Son Ltd

Author: Rosa, M A

Title: Corrugating defect terminology: Fabrication manual for corrugated box plants, 4th ed., 1982, 236 p

Publisher: TAPPI

Author: Sacharow, S

Title: Principles of food packaging, 2nd ed., 1980, 452 p

Publisher: AVI Publishing Co

Author: Swinbank, C

Title: Packaging of chemicals and other industrial liquids
and solids, 1983, 42 p

Publisher: Institute of Packaging

Author: Wright, G

Title: Corrugated fibreboard boxes and their design, use,
quality control and testing, 1982, 212 p

Publisher: Australian Paper Manufacturers

Periodicals

Title: Food and Drug Packaging

Publisher: Magazines for Industry Inc

Title: International Paper and Board Industry

Publisher: Binsted Publications

Title: Packaging

Publisher: Cahners Publishing Company

Title: Packaging News

Publisher: Maclean-Hunter Ltd

Title: Packaging Week

Publisher: Benn Publications

Title: Paper, Film and Foil Converter

Publisher: Maclean-Hunter Publishing Corp.

Section B. Supplementary textbooks and periodicals

Textbooks

Author:

Title: Adhesives, ASTM book of standards vol. 15.06, 1986

Publisher: ASTM

Author:

Title: AFERA standards, 1982, 32 p

Publisher: AFERA

Author:

Title: AFERA test methods, 1981, 84 p

Publisher: AFERA

Author:

Title: Bag making, loading and closing. Self-instruction
course

Publisher: PMMI

Author:

Title: Beverage containers: Reuse or recycling?, 1978, 160 p

Publisher: OECD

Author:

Title: Cavalcade of hot melts: Their future, their problems,
1977, 108 p

Publisher: TAPPI

Author:

Title: Closures. Self instruction manual

Publisher: PIRA

Author:

Title: Code of practise for lined carton board and memo-
randum on pallet specification, 1982, 5 p

Publisher: British Carton Association

Author:

Title: Extrusion of low density polyethylenes, 1982, 153 p

Publisher: T/C Publications

Author:

Title: Fachwörterbuch Verpackung, 1975, 843 p

Publisher: Verlag für Fachliteratur

Author:

Title: Fibre box handbook, 1983, 190 p

Publisher: Fibre Box Association

Author:

Title: Film, woven and nonwoven fabrics made from polypropylene, 1979, 190 p

Publisher: VDI- Verlag

Author:

Title: Flexography: Principles and practices

Publisher: Flexographic Technical Association

Author:

Title: GATF production quality control devices, 1974, 8 p

Publisher: GATF

Author:

Title: Glossary of terms used in the pressure-sensitive tape industry, 1978, 49 p

Publisher: AFERA

Author:

Title: Graphics for packaging designers. Visual aid kit

Publisher: PIRA

Author:

Title: Graphis packaging. Annual

Publisher: Graphis Press

Author:

Title: ICAO technical instructions for the safe transport of dangerous goods by air, 1983, 400 p

Publisher: ICAO

Author:

Title: Information sources on the canning industry, 1975

Publisher: UNIDO

Author:

Title: Information sources on the packaging industry, 1977

Publisher: UNIDO

Author:

Title: IMCO/ILO guidelines for training in the packing
of cargo in freight containers, 1978, 21 p

Publisher: IMO

Author:

Title: Manufacture and control of measuring containers.
Notes for the guidance of inspectors, 1977, 16 p

Publisher: Department of Prices and Consumer Protection

Author:

Title: Packaging code, British Standard 1133, 21 sections

Publisher: BSI

Author:

Title: Packaging machinery directory

Publisher: PMMI

Author:

Title: Packaging materials. Selected test methods, 1982, 184 p

Publisher: TAPPI

Author:

Title: Packaging of furniture for export, 1976

Publisher: UNIDO

Author:

Title: Paper, packaging, flexible barrier materials,
business copy products, ASTM book of standards,
vol 15.09, 1986

Publisher: ASTM

Author:

Title: Paper sacks in packaging, handling and distribution,
54 p

Publisher: Paper sack Development Association

Author:

Title: Paper shipping sacks. Selected test methods, 1982, 180 p

Publisher: TAPPI

Author:

Title: Plastic laminates, 1978

Publisher: TAPPI

Author:

Title: Plastics, ASTM book of standards, vol 8, 1986

Publisher: ASTM

Author:

Title: Prepacking of fruit and vegetables, 1979, 48 p

Publisher: OECD

Author:

Title: Printing ink handbook, 96 p

Publisher: National Association of Printing Ink Manufacturers

Author:

Title: Printing processes - flexography. Visual aid kit

Publisher: PIRA

Author:

Title: Printing processes - offset lithography. Visual
aid kit

Publisher: PIRA

Author:

Title: Printing processes - screen process. Visual aid kit

Publisher: PIRA

Author:

Title: Recommendations for safe packaging and marking of
cargo, 1976, 20 p

Publisher: National Association of Port Employers

Author:

Title: Recommendations on the safe transport, handling and storage of dangerous substances in port areas, 1981. 42 p

Publisher: IMO

Author:

Title: Recommended practices, 1976

Publisher: Adhesive Manufacturers' Association

Author:

Title: Substances used in plastic materials coming into contact with food, 1982. 86 p

Publisher: Council of Europe

Author:

Title: Transport requirements and quality standards for corrugated boxes in different countries

Publisher: FEFCO

Author:

Title: Transportation of dangerous goods; recommendations of the committee of experts on the transport of dangerous goods, 3rd revised ed., 1984

Publisher: United Nations

Author:

Title: Uniform freight classification 6000-B, 1982, 1087 p

Publisher: Uniform Classification Committee

Author:

Title: Unwind reel chart for use on orders for printed polyethylene reels, 1974, 1 p

Publisher: PIFA

Author:

Title: Users' guide to fibreboard cases. Visual aid kit

Publisher: PIRA

Author: Adams, J M

Title: Printing technology, 2nd ed., 1982

Publisher: Breton Publications

Author: Anderson, L O

Title: Wood crate design manual, USDA handbook No 252,
1964, 131 p

Publisher: US Government Printing Office

Author: Ash, M

Title: Encyclopedia of plastics, polymers and resins,
vol 1-3, 1981-83

Publisher: Chemical Publishing Co., Inc

Author: Aubey, R A

Title: Optical properties of pulp, paper, paperboard, and
pigments. Selected test methods, 1982, 130 p

Publisher: TAPPI

Author: Beach, M

Title: Getting it printed: How to work with printers and
other graphic arts services to control quality,
schedule and costs, 1986, 224 p

Publisher: Coast to Coast Books

Author: Bell, C C

Title: Preventive maintenance in a corrugated container
plant 1981, 50 p

Publisher: TAPPI

Author: Blaire, R N

Title: The lithographers manual, 1980, 635 p

Publisher: GATF

Authors: Boustead, I & G F Hancock

Title: Energy and packaging, 1981, 519 p

Publisher: Ellis Horwood Ltd

Author: Braun, D

Title: Identification of plastics, 1982

Publisher: Macmillan Publishing Co

Author: Braun, D.

Title: Identification of plastics: Qualitative analysis
of plastics using simple methods, 1982. 100 p

Publisher: T/C Publications

Author: Briston, J

Title: Plastic films, 2nd ed., 1983, 352 p

Publisher: George Godwin Ltd

Author: Briston, J

Title: Plastics in contact with food, 1974, 466 p

Publisher: Food Trade Press

Author: Brown, R P

Title: Handbook of plastics test methods, 1981, 448 p

Publisher: George Godwin Ltd

Author: Bureau, W

Title: What the printer should know about paper, 1982, 320 p

Publisher: GATF

Author: Chambers, E

Title: Reproduction photography for lithography, 1979, 340 p

Publisher: GATF

Author: Cramm, R H

Title: Coextrusion coating and film fabrication, 1983, 251 p

Publisher: TAPPI

Author: Crosby, N T

Title: Food packaging materials. Aspects of analysis and
migration of contaminants, 1981, 190 p

Publisher: Applied Science Publishers Ltd

Author: Deighton, J

Title: White paper on the packaging industry, 1983, 21 p

Publisher: Dennison Manufacturing Company

Author: Derveer, P D van & L E Haas

Title: International glossary of technical terms for the

pulp and paper industry, 1976, 235 p

Publisher: Miller Freeman Publications Inc

Author: Dennis, R

Title: Handbook on aerosols, 1976, 148 p

Publisher: EDTA Technical Information Centre

Author: Dichter, E

Title: Packaging: The sixth sense? A guide to identifying
consumer motivation, 1975, 160 p

Publisher: Van Nostrand Reinhold Co., Inc

Author: Eichler, J R

Title: Wood pallet manufacturing practices, 1976, 163 p

Publisher: Eichler Associates

Author: Evans, R

Title: Physical testing of plastics, 1981, 125 p

Publisher: ASTM

Author: Farnham, S E

Title: Guide to thermoformed plastics packaging: Sales
builder - cost cutter, 1972, 472 p

Publisher: Van Nostrand Reinhard Co., Inc

Author: Glassman, A

Title: Printing fundamentals, 1985

Publisher: TAPPI

Author: Griffen, R C

Title: Principles of package development, 2nd ed., 1985

Publisher: AVI Publishing Co

Author: Hadden, S

Title: Read the label: Reducing the risk by providing
information, 1985, 300 p

Publisher: Westview

Authors: Hersom, A C & E D Hulland

Title: Canned foods: Thermal processing and microbiology,

1981. 380 p

Publisher: Chemical Publishing Co., Inc

Author: Hochart, B

Title: Wood as a packaging material in developing countries. 1972. 111 p

Publisher: UNIDO

Author: Hughes, P E

Title: Do's and dont's of furniture packaging. 1981. 35 p

Publisher: Furniture Industry Research Association

Author: Jackson, J

Title: Fundamentals of food canning technology. 1979. 342 p

Publisher: AVI Publishing Co

Author: Johnson, M

Title: Aerosol handbook, 2nd ed., 1982

Publisher: Wayne E. Dorland Publishing Co

Author: Kline, J E

Title: Paper and paperboard manufacturing and converting fundamentals, 1982. 232 p

Publisher: Miller Freeman Publications Inc

Author: Langston, C

Title: Furniture packing manual. 1980

Publisher: Furniture Industry Research Association

Author: Larrabee, C

Title: How to package for profit: A manual on packaging. 1976

Publisher: Ayer Co. Publications, Inc

Author: Lawson, R

Title: Advertising and labelling laws in the Common Market, 3rd ed., 1982

Publisher: Jordon and Sons

Author: Lewis, R W

Title: Paper coating additives test procedures by function

properties, 1976, 102 p

Publisher: TAPPI

Author: Louasz, J

Title: Legislation on packaging in the EEC, 1981, 356 p

Publisher: European News Agency

Author: Montresor, J M

Title: Packaging evaluation: The testing filled transport packages, 1982, 84 p

Publisher: Institute of Packaging

Author: Palling, S J

Title: Development in food packaging 1, 1980, 201 p

Publisher: Applied Science Publishers Ltd

Author: Peleg, K

Title: Produce handling, packaging and distribution, 1985

Publisher: AVI Publishing Co

Author: Pilditch, J

Title: Silent salesman: How to develop packaging that sells, 1973

Publisher: Beekman Publishers Inc

Author: Paulson, W G

Title: Planning a corrugated container plant, 1980, 117 p

Publisher: TAPPI

Author: Pintauro, N D

Title: Food packaging, 1978, 415 p

Publisher: Noyes Data Corp

Author: Plastic Bottle Institute

Title: Good practices manual and glossary

Publisher: Society of the Plastic Industry Inc

Author: Pritchard, E J

Title: Guide to quality control for print management, 148 p

Publisher: PIRA

Author: Raphael, H J
Title: Package production management, 1976, 250 p
Publisher: AVI Publishing Co

Author: Reed, R F
Title: Instruments and control for the graphic arts
industries, 1971, 160 p
Publisher: GATF

Author: Reilly, C
Title: Metal contamination of food, 1980, 235 p
Publisher: Applied Science Publishers Ltd

Author: Rogers, J L
Title: Quick frozen foods: The commerce and technology of
processing, packaging and distribution, 1972, 520 p
Publisher: Food Trade Press

Author: Rosa, M A
Title: Corrugating and corrugated containers, 1982, 234 p
Publisher: TAPPI

Author: Roth, L
Title: Package design: An introduction to the art of
packaging, 1981, 212 p
Publisher: Prentice Hall

Author: Sacharow, S
Title: Basic guide to plastics in packaging, 1973, 224 p
Publisher: Van Nostrand Reinhold Co., Inc

Author: Sacharow, S
Title: Package as a marketing tool, 256 p
Publisher: Chilton Book Company

Author: Sacharow, S
Title: Packaging design, 1983, 256 p
Publisher: PBC International Inc

Author: Saechtling, H
Title: International plastics handbook, 1984, 600 p
Publisher: Macmillan Publishing Co

Author: Sanders, P A
Title: Handbook of aerosol technology, 1979, 540 p
Publisher: Van Nostrand Reinhold Co., Inc

Author: Stern, W
Title: Handbook of package design research, 1981, 590 p
Publisher: John Wiley and Sons

Author: Surtees, H
Title: Materials handling: Packing for profit. A practical
guide to load unitisation, 1979, 95 p
Publisher: HMSO

Author: Thorpe, R H
Title: Visual can defects, 1984, 48 p
Publisher: Campden Food Preservation Research Association

Author: Touhill, C J
Title: Drum reconditioning process optimization, 1981, 68 p
Publisher: Touhill, Shuckow and Associates

Author: Vanthourout, A
Title: Manual in packaging, 1984, 890 p
Publisher: Belgian Packaging Institute

Author: VDI (ed)
Title: Injection moulds, 1980, 210 p
Publisher: VDI-Verlag

Periodicals

Title: Australian Packaging
Publisher: Business Press International

Title: Boxboard Containers
Publisher: Maclean-Hunter Publishing Corp.

Title: Canadian Packaging
Publisher: Maclean-Hunter Ltd (Canada)

Title: Converter
Publisher: Converter

Title: European Packaging Newsletter and World Report
Publisher: International Packaging Club

Title: Good Packaging Magazine
Publisher: Good Packaging Magazine

Title: Hazardous Cargo Bulletin
Publisher: Intapress Ltd

Title: Labels & Labelling International
Publisher: Labels & Labelling Publishers Ltd

Title: Materials Handling Engineering
Publisher: Penton/IPC Inc

Title: Modern Plastics International
Publisher: McGraw-Hill Publications Overseas Corp

Title: Package Printing
Publisher: Package Printing

Title: Packaging
Publisher: Wheatland Journals Ltd

Title: Packaging Digest
Publisher: Packaging Digest

Title: Packaging Digest Guide
Publisher: Farrington Post

Title: Packaging Japan
Publisher: Nippo Co Ltd

Title: Packaging Technology
Publisher: Packaging Technology

Title: Packaging Today

Publisher: Admedia

Title: Panorama

Publisher: Institute of Packaging

Title: Paperboard Packaging

Publisher: Magazines for Industry Inc

Title: Printing & Packaging

Publisher: Peter Wranesch

Title: TAPPI Journal

Publisher: TAPPI

Title: Transit Packaging

Publisher: PIRA

Section C. Packaging abstracts and documentation services

Title: Information Handling Services

Contact: IHS

Title: International Packaging Abstracts

Publisher: Pergamon Press

Title: International Trade Centre Packaging Documentation
Scheme

Contact: International Trade Centre

Title: Predibriefs Containers & Packaging

Publisher: Predicasts

Title: Predibriefs Plastic products

Publisher: Predicasts

Title: PIRA packaging documentation service

Contact: PIRA

Section D. Addresses

Adhesive Manufacturers' Association
111 E. Wacker Drive
Chicago, IL 60601, USA

Admedia
345 Goswell Road
London EC1V 7QA, United Kingdom

AFERA
Association des Fabricants Européens des Rubans Auto-Adhésifs
9 Av. Hoche
75008 Paris, France

Applied Science Publishers Ltd
22 Rippleside Commercial Estate, Ripple Road
Barking, Essex IG11 0SA, United Kingdom

ASTM
American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103, USA

Australian Paper Manufacturers
4 South Gate, South Melbourne
Camberwell, Victoria, Australia

AVI Publishing Co., Inc
250 Post Road East
P.O.B. 831, Westport, CT 06881, USA

Ayer Co. Publications, Inc
382 Main Street
P.O.B. 958, Salem, NH 03079, USA

Beekman Publishers Inc
P.O.B. 888, Woodstock, NY 12498, USA

Belgian Packaging Institute
Rue Picard 15
1210 Brussels, Belgium

Benn Publications
Sovereign Way
Tonbridge, Kent TN9 1RW, United Kingdom

Binsted Publications
Walton House, 90 London Road
Hook, Hampshire RG27 9LF, United Kingdom

Blackie & Son Ltd
Wester Cleddens Road, Bishopbriggs
Glasgow G64 2NZ, United Kingdom

Breton Publications
Wadsworth Publishing Company Inc
Statler Office Bldg, 20 Park Plaza
Boston, MA 02116, USA

British Carton Association
11 Bedford Row
London WC1R 4DX, United Kingdom

British Fibreboard Packaging Association
Sutherland House, 5-6 Argyll Street
London W1V 1AD, United Kingdom

British Plastics Federation
5 Belgrave Square
London SW1X 8PH, United Kingdom

British Tensional Strapping Association
Southbank House, 235 Blackfriars Road
London SE1 8NW, United Kingdom

BSI
British Standards Institution
2 Park Street
London W1A 2BS, United Kingdom

Business Press International

P.O.B. 204, Strawberry Hills, N.S.W. 2012, Australia

Cahners Publishing Company

Cahners Plaza, 1350 East Touhy Venue

P.O.B. 5080, Des Plaines, IL 60018, USA

Campden Food Preservation Research Association

Chipping Campden

Gloucestershire GL55 6LD, United Kingdom

Canning Trade

2619 Maryland Avenue.

Baltimore, MA 21218, USA

Chemical Publishing Co., Inc

80 8th Avenue

New York, NY 10011, USA

Chilton Book Company

Chilton Way

Radnor, PA 19089, USA

Coast to Coast Books

2934 N.E. 16th Avenue

Portland, OR 97212, USA

Converter

111 St. James's Road

Croydon, Surrey CR9 2TH, United Kingdom

Council of Europe

Publications Section, Place Lenôtre

B.P. 431 R6, 67006 Strasbourg, France

Dennison Manufacturing Company

300 Howard Street

Framingham, MA 01701, USA

Department of Prices and Consumer Protection
Abell House, John Islep Street
London SW1P 4LN, United Kingdom

Wayne E. Dorland Publishing Co
P.O.B. 264, Mendham, NJ 07945, USA

EDTA Technical Information Centre
P.O.B. 62, Oak Ridge, TN 37830, USA

Eichler Associates
P.O.B. 328, Cape Coral, FL 33910, USA

European Carton Makers Association
Laan Copes van Cattenburch 79
2585 EW Den Haag, Netherlands

European News Agency
Rue Albert-Elisabeth 46
1040 Brussels, Belgium

Fearrington Post
P.O.B. 107, Pittsboro, NC 27312, USA

FEFCO
European Federation of Corrugated Board Manufacturers
Rue d'Amsterdam 37
75008 Paris, France

Fibre Box Association
5725 North East River Road
Chicago, IL 60631, USA

Flexographic Technical Association
95 West 19th Street
Huntington Station, NY 11746, USA

Food Trade Press
29 High Street, Green Street Green
Orpington, Kent BR6 6LS, United Kingdom

Furniture Industry Research Association
Maxwell Road
Stevenage, Hertfordshire SG1 2EW, United Kingdom

GATF
Graphic Arts Technical Foundation
4615 Forbes Avenue
Pittsburg, PA 15213, USA

George Godwin Ltd
Longman House, Burnt Mill
Harlow, Essex CM20 2JE, United Kingdom

Good Packaging Magazine
1315 East Julian Street
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8008 Zürich, Switzerland

Prentice Hall
Englewood Cliffs, .NJ 07632, USA

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HMSO
Her Majesty's Stationery Office
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Market Cross House, Cooper Street
Chichester, West Sussex PO19 1EB, United Kingdom

ICAO
International Civil Aviation Organization
1000 Sherbrooke Street West
Montreal, Quebec H3A 2R2, Canada

IHS
Information Handling Services
15 Inverness Way East
P.O.B. 1154, Englewood, CO 80150, USA

IMO
International Maritime Organization
4 Albert Embarkment
London SE1 7SR, United Kingdom

Indian Institute of Packaging
E-2, MIDC Industrial Area, Andheri (East)
Bombay-400 093, India

Industrial and Trade Fairs Limited
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Institute of Packaging
Sysonby Lodge, Nottingham Road
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London WC2E 7PB, United Kingdom

International Packaging Club
80 South Early Street
Alexandria, VA 22304, USA

International Trade Centre
Palais des Nations
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London N1 6EE, United Kingdom

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Maclean-Hunter Ltd (Canada)
Maclean-Hunter Building, 777 Bay Street
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366 Third Ave
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McGraw-Hill Publications Overseas Corp
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San Francisco, CA 94105, USA

National Association of Paper Merchants
3 Plough Place, Fetter Lane
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National Association of Port Employers
1-19 New Oxford Street
London WC1A 2D2, United Kingdom

National Association of Printing Ink Manufacturers
47 Halstead Avenue
Harrison, NY 10528, USA

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127 Commercial Road
South Yarra, Victoria 3141, Australia

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Tokyo 102, Japan

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NOWEA
Postfach 32 02 03
4000 Düsseldorf 30, Federal Republic of Germany

Noyes Data Corp
Noyes Building, Mill Road at Grand Avenue
Park Ridge, NJ 07656, USA

OECD
Organisation for Economic Co-operation and Development
2, rue André-Pascal
75775 Paris Cedex 16, France

Package Printing
401 North Broad Street
Philadelphia, PA 19108, USA

Packaging Digest
400 North Michigan Avenue
Chicago, IL 60611, USA

Packaging Institute
20 Summer Street
Stamford, CT 06901, USA

Packaging Technology
70 Oak Wood Street
Norwood, NJ 07648, USA

Paper Sack Development Association
Young Everitt and Young
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Penton/IPC Inc
P.O.B. 95759, Cleveland, OH 44101, USA

Pergamon Press
Headington Hill Hall
Oxford OX3 0BW, United Kingdom

PIFA

Packaging and Industrial Film Association
The Fountain Precinct, 1 Balm Green
P.O.B. 121, Sheffield S1 3AF, United Kingdom

PIRA

Research Association for Paper, Printing & Packaging Industries
Randalls Road
Leatherhead, Surrey KT22 7RU, United Kingdom

PMMI

Packaging Machinery Manufacturers' Institute
1343 L Street North West
Washington, DC 20005, USA

Predicasts

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Cleveland, OH 44106, USA

SEPIC

17 rue d'Uzes
75002 Paris, France

Society of the Plastic Industry Inc

355 Lexington Avenue
New York, NY 10017, USA

TAPPI

Technical Association of the Pulp and Paper Industry
Technology Park Atlanta
P.O.B. 105113, Atlanta, GA 30348, USA

T/C Publications

P.O.B. 842, El Segundo, CA 90245, USA

Technonic

P.O.B. 3535, Lancaster, PA 17604, USA

Touhill, Shuckrow & Associates

Pittsburgh, Penna, USA

Tropical Products Institute

56/62 Gray's Inn Road
London WC1X 8LU, United Kingdom

UNIDO

United Nations Industrial Development Organization
United Nations Sales Section
Palais des Nations, 1211 Geneva 10, Switzerland

Uniform Classification Committee
Suite 1160, 222 South Riverside Plaza
Chicago, IL 60606, USA

United Nations
Palais des Nations
1211 Geneva 10, Switzerland

US Government Printing Office
Washington, DC 20402, USA

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Graf-Recke-Strasse 84
Postfach 1139, 4000 Düsseldorf, Federal Republic of Germany

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Wilckenstrasse 3-5
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5500 Central Avenue
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WHO
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1211 Geneva 27, Switzerland

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